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House & Home

February 1956 SIX DOLLARS A YEAR-ONE DOLLAR A COPY



What's selling in Los Angeles: Kitchens lead trend to more luxury - page 110

Round Table: Forty ways to save on materials handling - page 126

How a small builder tripled his sales - page 158

Philadelphia squeezes bootleg value out of slums - page 61

What it takes to make a split level look better - page 136

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ROUNDUP

Watch for the 'new look' in MPRs. Notes on a lengthy strike. How high should public housing incomes go? Prefab outlook.

FHA will soon issue its first set of minimum property requirements embodying its new idea of preferred standards.

The MPRs will cover landscaping and site improvements.

Minimums will as usual be spelled out. But now, for the first time, FHA will also spell out what it would *rather* have builders do about such items as grading, drainage, lawn planting, shrubbery, trees, driveways, walks and steps.

The reward for using preferred standards: higher valuations.

The dual scheme is the brainchild of FHA Chief Architect Neil Connor and his industry advisory committee which is mid-way in the monumental task of rewriting FHA's Balkan empire of Minimum Property Requirement books into a single document. FHA officials say the new rules will go into effect in time to govern spring building (see p. 38).

Washington inside: Ailing F. Stuart Fitzpatrick, veteran manager of the US Chamber of Commerce's construction and civic development department, may soon retire. . . . Friends say Louis J. Fellenz Jr., FHA's rental housing chief is about ready to quit. . . . Here is what some of the leading housing trade groups spent on lobbying from July-September last year, according to statements filed with Congress: National Housing Conference (public housing), \$14,069; US Savings & Loan League, \$18,293; NAHB, \$12,734 (2d quarter); NAREB, \$30,207 (2d quarter).

CIO plans to ask architects to stop specifying plumbing fixtures made by the Kohler Co. of Kohler, Wisc., were quietly squelched by AIA Executive Director Ned Purves. The United Automobile Workers Union has been on strike against Kohler 23 months, the longest and most bitter major strike in the nation.

AFL plumbers agreed even before the labor merger to support a CIO boycott campaign but Peter T. Schoemann, who recently succeeded Martin Durkin as general president of the plumbers, cautioned his members that "you must handle and install Kohler products" on the job or risk violating the Taft-Hartley ban on secondary boycotts.

When the CIO obtained a list of the nation's architects and laid plans to urge them to stop specifying Kohler plumbing, Purves persuaded labor's Dick Gray to intercede and the letters were not sent.

Operation Demonstrate—Cleveland's big program for home remodeling—is taking hold. Permits for additions and alterations of one- and two-family homes were up 24% last October over October '54. That was the month the promotion began. Their valuation topped the year before by 70%. All other categories of alteration permits were down or unchanged.

More public housing for \$100-a-week families was urged by New York's state division of housing. The division's boss, Joseph P. McMurray (former staff director of the US Senate banking committee) candidly admitted his reason was to prevent subsidized housing from becoming economic, social and racial (i.e. Negro) ghettos.

Current income limits for NY state public housing (27,492 units in New York City, 7,418 upstate) generally run from \$60 to \$80 a week. Korean war veterans with five or more children may earn up to \$5,000 a year, but there are very few of them. Income limits for admission to federal public housing in New York City were raised \$300 last year, now range from a base of \$3,300 to \$4,000 with \$100 extra per child.

McMurray admitted his plan might "blow up a storm." It did. Snapped the pro-public housing New York World-Telegram & Sun: "The division is wading into deep water.... Where would the trend stop? Would it be \$125 next time, \$150 the time after? There has to be a sensible limit on who is eligible. The alternative is a spiral of socialism in housing."

Prefabbers expect to produce a record 120,000 homes this year. PHMI says nearly 100,000 houses were shipped last year, compared with 77,000 in 1954.

NEWS continued on p. 38

THIS MONTH'S NEWS

(index to the top stories)

Materials & prices: shortages in glass, gypsum, cement seem likely to last six months p. 39

Savings & loan conversions: industry goes into a dither over Bank Board plan to remove the profitsp. 41

Mortgage market: first signs appear that discounts are decreasing but money is still very tightp. 43

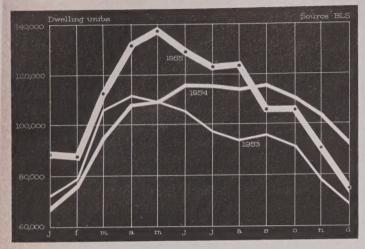
Air conditioning gets a shot in the arm as Bill Levitt and Carrier sign a giant contract ...p. 46

Operation Home Improvement gets a booming kickoff in Washington. Sears Roebuck bids for one-stop repair tradep. 49

Profitless slums? A year of housing code enforcement in Philadelphia drives prices of slum property down 75%p. 61

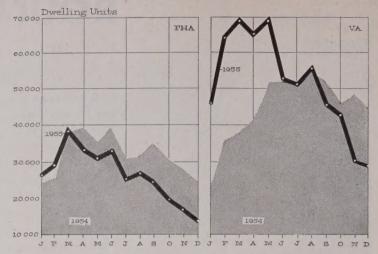
Regular Departments:

NONFARM HOUSING STARTS



Boosted by an upward revision of 1,900 starts in September, housing starts for 1956 (first estimate) reached 1,329,900. This was only 5% (66,100 units) short of the 1950 record volume. Private starts, with 72,200 in December (the month's total of 2,800 public units was the largest since last June), reached a year-end total of 1,310,800, only 3% below 1950.

FHA AND VA APPLICATIONS



FHA applications reached a 53-months low in December (13,683) but the agency finished the year with an all-time high of 615,000. More than half the loans insured in '55 were on existing houses, an increase of 75,000 over 1954. Tight mortgage money was blamed for plummeting VA requests—down to 24,892 in December, lowest point since January '54.

GOVERNMENT EASES FHA, VA TERMS

Return to 30-year loans will open market to fringe buyers

Q. How much will the return of 30-year mortgages help home sales?

A. It will enable more marginal buyers to qualify under FHA and VA. It costs \$3.46 a month less to buy a \$12,000 FHA home on 30-year terms than on 25-year. So a buyer can qualify with \$3.46 a week less income.

When no-down, 30-year VAs were abolished last July, Mortgage Banker Jack Halperin of Long Island checked a sample of 200 actual buyers on Long Island and in Pennsylvania. He found that 27—close to 14%—had too little income to qualify on 25-year amortization. The inference: restoration of the 30-year loans may now pep up sales 14% in some areas.

But the change-back will not make mortgage money any easier to get.

"The problem is not so much the term of the loan as the supply of money," says Mortgage Banker Max Pringle. Most lenders agree discounts will be only fractionally higher on the 30-years—not enough to keep builders from buying them.

In many areas, 30-year terms are still being offered to buyers. There, the new order means 30-year terms need not dry up as scheduled, since loans not yet closed may be converted to the new, easier basis.

Another question in many lenders' minds: how much demand is there for new housing on any terms? Says Economist Gordon McKinley of Prudential: "Although tight money and high prices are responsible to some extent for the slowdown, the main factor is sustainable demand." Housing Analyst Roy Wenzlick says he found "some indication of saturation in the housing market a year ago, but it seems to be disappearing now."

Not everybody liked the extension of the loan term. "Neither wise nor desirable," said some lenders.

Builder William Levitt thinks the FHA-VA move is "only a step in the right direction, not nearly enough." Said Levitt: "All the credit controls were most ill-advised. My guess is that they'll take everything off by Feb. 15."

FHA readies revised site planning MPRs

After four months of study, FHA is about to come up with a major revision of its minimum property requirements governing site improvement.

The final version will be ready about the middle of this month. These rules can now be tabbed as likely to go on the books:

- 1. Lawn area and quantity of shrubbery will be determined by local practice.
- 2. Builders will be required to submit first-floor elevations of the house in relation to the street.
- 3. Builders will be required to furnish information on the proposed ground elevation at the four corners of the house.

Improved drainage will be further emphasized with new standards for rough and finished grading. Whether minimum width for driveways will be finally set at 8'-as recommended at an early meeting of FHA's 16-man industry committee—is not sure. Argument was still going last month over a maximum slope standard (at one time fixed at a 2:1 ratio). Workmanship requirements for lawns would probably be set up to apply if the landscaping is under the mortgage. And there was sure to be a set of new rules expanding carports and carport entrances to fit longer automobiles. The new rules probably will require builders to save trees "if possible."

Most of the debate with the industry committee (it included, among others, nurserymen, landscape architects, engineers and planners) centered on FHA's so-called preferred methods of meeting MPRs as opposed to the minimum requirements. The landscaping MPRs are the first where FHA has put this new idea for fostering better housing standards to work. The problem in devising preferred standards (which are supposed to earn higher valuations): representatives of a specific industry are likely to argue that FHA-recommended procedures are not the best method.

MATERIALS & PRICES

Gypsum, cement, glass race to meet demand; prices will rise

Shortages in glass, gypsum and cement are not likely to ease for six months.

Gypsum has the best chance of getting supply up to demand—but not until later in the year. Glass and cement will be under such demand pressure for other uses—mostly roads and autos—that home builders won't get all they want until industry expansion hits full stride. (Point to remember: builders have a notable reputation for making do with what is available.)

Price of all three materials is likely to go still higher. Already glass and cement have risen faster than the building materials average. Window glass is up 19% over 1950 and cement up nearly 17%, compared to a BLS estimate of 15% for all building materials. Gypsum products are up 16.7% since 1950.

Glass makers still lagging behind demands of market

Despite record expansion plans, it will be at least six months before the glass industry tools up enough new plants to relieve the shortage.

The demand came on too fast. Even Libby-Owens-Ford, now expanding at a phenomenal rate, did not put on real steam until last year. The company had spent \$87 million on plant improvement and expansion since the end of World War II. It became clear that even this would not be enough. Early last year, Libby-Owens-Ford started a 16-month expansion program which will cost over \$50 million.

Some manufacturers go easy on such big plans. "You can't just expand with every boom that comes along," comments one manufacturer, implying that caution is the better part of production. But the shortage is so acute that overproduction hardly seems possible. Imports, coming in from all over the world, now account for 7-9% of all glass used in the US. Schools,

skyscrapers, automobiles and houses are using it up faster than it can be manufactured. Says a spokesman for American Window Glass Co., third largest in the flat glass field: "We just can't produce enough glass to meet the demand. It's been that way for 15 months and it looks like it will be that way for half of '56."

Total flat glass production last year was about 1.5 billion sq. ft. The automobile industry used more than three times as much glass as in 1940, for a total slightly in excess of 250 million sq. ft. The industry does not use quite the same kind of glass as builders, but it requires the same manufacturing facilities.

Gypsum industry expects 30 % rise in production in 1956

The gypsum industry is not afraid of overproduction. If manufacturers catch up with the demand for gypsum board—and they may make it by the end of the year—they figure they can always keep plants humming with new products.

So the gypsum makers are pushing ex-

EXPERTS LOOK FOR ANOTHER 10% BOOST IN LABOR PAY

The average union wage for the construction trades increased by 9¢ an hour during the year ending last October. Industry experts think it is certain to go up at least that much again in 1956.

Reason: about half of union bargaining sessions last spring ended in two- or three-year contracts for the building trades—a marked departure from the industry's historical one-year contract policy. So half the organized section of construction labor—estimated at 60% of the total—has an automatic raise coming up in the spring.

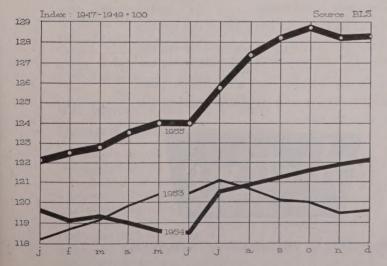
Comments NAHB Labor Director Andrew Murphy: "We already have a built-in increase in those areas, so it seems inevitable that we will get a general increase. We expect around 10% anyway."

pansion hard. Two of 11 new plants scheduled were finished late in '55. Four or five will be operating by mid-1956, the others by the end of the year. They will be spread out across the nation and they are not all being built by the two giants of the field. (One, US Gypsum, spent \$34 million on alterations and additions last year and intends to spend about the same this year. National Gypsum earmarked \$75 million for five years of expansion a year ago.)

The industry turned out 7.25 billion sq. ft. of gypsum board in 1955, compared to 4.5 billion in 1947. This remarkable increase in output is topped only by the expansion record of the plumbing and heating business for the same period. By the end of this year total production of gypsum may reach 9.5 billion sq. ft., a 30% increase over 1955. Manufacturers feel that this will be enough to meet builders' demands. Says Lloyd Yaeger, general manager of the Gypsum Assn.: "By the end of the year we expect to be scrambling for new orders."

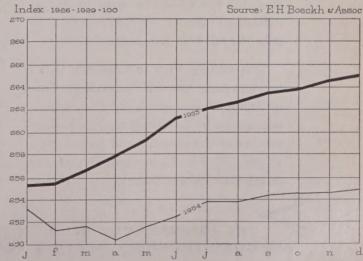
NEWS continued on p. 41

BUILDING MATERIALS PRICES



BLS' index of building materials prices began a gradual increase again (.2 points in a month) after November's paradoxical drop. Ten revisions in November's figures brought the index back in line. Major change in December: prepared paint, up .8 points.

RESIDENTIAL BUILDING COSTS



E. H. Boeckh's 20-city index of residential construction costs (which reappears here this month after an 18-month absence) rose ½ point between November and December '55. It was up nearly 5% over the 1954 average and 150% above 1940.



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LUMBER AND PLYWOOD PRICES RISE SHARPLY AFTER FLOODS

Floods in northern California and southern Oregon pushed the price of fir lumber—biggest volume US species—to its highest leve! in more than two years. The \$5 jump occurred the first week in January. It sent 2" green dimension as high as \$85 per MBF in the midwest. Construction grades reached a minimum of \$80. The damaged area is normally the heaviest fir producing region on the West Coast.

Studs were up as much as \$15, partly because a heavy demand for railroad ties had swung many stud-producing green mills into this line, which requires less manufacturing.

Plywood took the previously-announced January price rise with no drop in orders. Quarter-inch AD, the index grade that was at \$85 per 1,000 sq. ft. for a year and a half, is up to \$90 at nearly all mills.

Sheathing climbed from \$116 to \$122 the first week in January and there were indications it would recover a little more before winter ends.

Cement output to rise; more price increases due

Cement is still scarce in many areas. But the industry is expanding at a rate that promises to increase supplies 20 to 30 million barrels by the end of the year. Current capacity is about 300 million barrels. Some 31 companies in 22 states had expansion plans last year; another 19 companies in 23 states plan to expand this year. Increased capacity for the two years may reach 59 million barrels.

Home builders still have a better chance of getting what they need than non-residential builders, say experts, where the potential delays in supply are greater.

Expansion means price increases. A new round of hikes of from 10¢ to 25¢ a barrel went into effect recently. But two companies which announced a 25¢ rise effective for the first quarter of '56 cut it back to 15¢ at some mills. Universal Atlas Cement Co. said the 15¢ increase would apply at two of their plants in Pennsylvania and New York (bringing the price to \$3.05 a barrel) and at one plant in Kansas (bringing it to \$2.95). Alpha Portland Cement Co. let the 15¢ increase raise prices at three mills to \$3.05, held the line at the Jamesville, N.Y. plant at \$3.25.

VA loosens up on policy toward water, sewer liens

VA changed its policy toward liens securing community facilities.

In the past the agency held that liens on a property by a water, sewage or street maintenance company must be subordinate to the VA mortgage. This "involved serious practical obstacles" to selling houses on VA terms, the agency admitted, now that so many subdivisions have utility setups. It was hardest on VA sales of existing houses.

Lenders may now disregard such liens if they get prior approval from VA.

Government proposes ban on windfalls in S&L conversions to stock companies

Two new rules to govern S&L conversion from federal mutuals to state chartered stock companies had the S&L industry in a flap. Many thought they would effectively bar any more such switches and the top brass of US Savings & Loan League got together in Washington to consider them.

Rule No. 1: Before conversion federal mutuals must give mutual owners a pro rata share of the total going value of the association.

Rule No. 2: The new owners must put up a stock equity equal to 5% of total savings accounts (this is $2\frac{1}{2}$ times what California now requires).

The new rules were proposed by the Federal Home Loan Bank Board, which for nearly a year has worried over the capital gains S&L managements might reap from such conversions at the expense of the mutual owners.

Legal loophole

Such shifts are perfectly legal. There have been 29 of them since 1950* in the 11 states that permit stock S&Ls—California, Texas, Colorado, Illinois, Washington, Ohio, Virginia, Louisiana, Kansas, Nevada and Utah.

But critics fear that S&L managers could often buy the resulting stock for much less than its real value, thus depriving the mutual owners of their share of the mutual reserves. Chairman Walter McAllister of the HLBB warned a California S&L meeting months ago: "The statement is made that people who are on the 'in' buy the stock for \$100 or thereabouts and it has a book value of \$200 to \$300 and up."

Before Sen. Prescott Bush (R, Conn.) called Congress' attention to the situation last June, the HLBB stretched its powers to suspend action on proposed conversions despite its dubious authority to do so. "All I want to do is see that there is no stink stirred up or any suits," explained McAllister. "I'm not at all unsympathetic with what has been done."

Indeed, McAllister and other members of the HLBB have approved much of what has been done. Conversion from federal to state mutual is authorized by a federal law if two-thirds of the shareholders and the state S&L commission approve (Washington has no say-so). A federal mutual may convert to a state-chartered stock company with approval of both Washington and the state concerned. Eight S&Ls have made the jump in one move, and ten in two.

California rules

In California, where seven federal mutuals have converted to state stock companies, the law lets the state S&L commissioner write the state rules. A Los Angeles attorney, William Moseley Jones, who is also an S&L officer, worked out conversion

* Including 11 state-chartered mutuals under federal jurisdiction because their accounts were insured by the Federal S&L Insurance Corp.

terms with Washington (as slightly modified by the California commission) which impose three important restrictions:

- 1. The company's reserves as of conversion time are frozen and must be maintained. They can never be paid out as dividends to stockholders.
- 2. The converted company must issue guarantee stock equal to 2% of its savings accounts. Shareholders in the original mutual get first crack at buying it. Warrants are issued, pro rata, and for 60 days after conversion the stock can be sold to no one else.
- 3. All the frozen reserves of the former company form an untappable pool against which "contingency certificates" are issued to current shareholders. If the company liquidates during the next 15 years, the certificates entitle the shareholders to their slice of the reserve. After 15 years, the certificates lapse.

The stinger, say state officials, is that management people, once the 60-day grace period is over, tend to acquire at par stock whose value immediately soars. Most savings balances are so small that they entitle shareholders to a certificate to buy only a fraction of a share of stock—and no stock fractions are issued. The tendency in California has been for big stockholders to hang on to their stock and collect dividends (not possible in a mutual).

No melons yet

As far as officials know, no conversion melons have actually been cut, among other reasons because of the 15-year freeze.

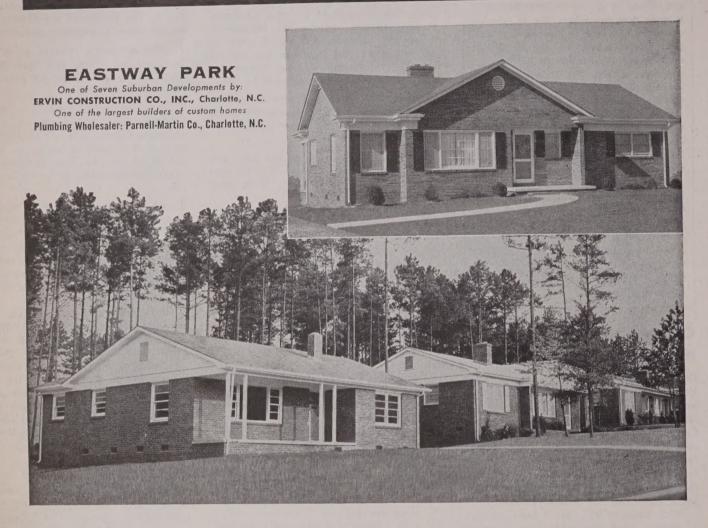
Under the terms the Home Loan Bank Board proposes, there would be no melon. In fact S&L experts agree nobody would bother to convert. Says one: "You'd put up a lot of money and all you'd get is naked assets." Savings and loan spokesmen had not criticized the board's plan publicly. But privately some were saying it was like curing a headache by decapitation. Some S&L men argue that the mutual shareholder loses only a theoretical advantage from conversion anyway. He has a claim to undistributed profits, but few if any ever realize it. Reason: the money in the kitty is not divided up unless an S&L liquidates. So some S&L men predict there will be court battles if the Bank Board goes ahead with its restrictions.

Underlying the whole issue is a more remote but crucial problem for the entire S&L industry: will the ruckus over stock S&Ls weaken the case that savings and loans are entitled to preferential income tax treatment because they are mutuals.

The Treasury lets S&Ls put tax free money into their reserves up to 12% of their savings accounts. Banks have to pay corporate taxes on their earnings above a reasonable loss ratio, which is much lower. Banks think it is unfair. But the tax edge is one of the big reasons why S&Ls—paying higher interest—are expanding their share of the nation's savings so fast.

NEWS continued on p. 43

THERE'S A NEW TREND IN BATHROOMS!



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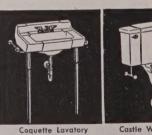
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MORTGAGE MARKET

The turn may be now

Discounts ease ever so slightly in a few cities, but hold steady in more. But bargains grow scarcer and some lenders look for summer shortage of loans

Mortgage discounts seem to have hit their peak and started slowly down.

First signs of change became noticeable in mid-January. They were nothing dramatic, just faint indications. But almost all the evidence pointed the same way. Items:

Some big lenders (Metropolitan Life, for instance) had snapped up a surprising volume of FHAs and VAs for immediate delivery before the end of 1955. The mortgage fraternity had two explanations: 1) the slowdown in house sales this fall resulted in a shortfall on November commitments; 2) some big buyers figured discounts were as high as they will go, were grabbing bargains while they lasted. Said one mortgage man: "Met bought everything we could deliver."

None of House & Home's panel of mortgage bankers reported discounts up from December to January. In three cities-Detroit, Houston and San Francisco-panel members reported some scattered 1/2 point declines in discounts—mostly on better grade of paper.

Some mortgage men were stepping up efforts to line up loans for summer delivery. Said one: "We feel the supply of loans may be short by summer. So we are agreeing to take business at a better price than we can sell it for right now."

Mortgage money was still tight as a Marilyn Monroe dress. And the huge overhang of unsold mortgages seemed likely to forestall a strong market for several months. How two mortgage experts appraise the outlook:

"It's a little early to say for sure what's going to happen but I look for a little easing in discounts in the next 60 days-that's my guess."-former MBA President William A. Clarke of Philadelphia.

"We think the mortgage market has turned. Of course, you need a micrometer to measure the turn. But we see a little more strength at the bottom. Apparently starts will continue to drop. Savings are beginning to go up again."-President Thomas P. Coogan of Housing Securities Inc., New York.

Fanny May business soars in tight market

The mortgage market was so tight in December that Fanny May did three times as much business that one month as in the whole first half of 1955.

The government mortgage agency bought \$28 million worth of FHA and VA loans in December despite FNMA's 3% stock requirement and prices from 991/2

That was more than double the October rate which signaled a big rise in Fanny May's popularity as mortgage discounts climbed (Dec., News). December secondary market purchases meant private investors had to buy another \$850,000 in Fanny May common stock, Fanny May secondary market purchases in '55:

N	o. of Mortgages	AMOUNT OF
Month	PURCHASED	PURCHASES
January	. 16	\$142,000
February		103,000
March		805,000
April		1,257,000
May		2,537,000
June		4,599,000
First six months	. 1,173	\$9,443,000
July	. 600	\$5,177,000
August		7,338,000
September		7,769,000
October		12,607,000
November		15,458,000
December	. 2,987	28,257,000
Last six months	8,309*	\$76,606,000**
TOTAL	. 9,482	\$86,049,000

* Represents a 645% increase in number of mortgages purchased in the second half over the first helf of 1955.

NEWS continued on p. 45

MORTGAGE MARKET QUOTATIONS

FHA 41/2s (Sec. 203) (b)

	Maximum old terms*	Maximum n	ew terms†	25 year, 10% Immediate	down
Boston local	a	101	101	a	a
Out-of-state	961/2-1	98 97-98	97-98	981/2b	a
Chicago**	971/2-9	98 98-99	98-99	99	99
Detroit	97-98	98-99	98	981/2-991/2	981/2
Denver	a ·	99	981/2	99	981/2
Houston	98-99	98-99	98-99	99-parf	99-par
Jacksonville	97-98	97-98	97	98-99	98-99
Kansas City	par	par	98	par	98-99
New York	99-pa	r 99-par	99-par	99-par	99-par
Philadelphiad	par	par	par	par	par
San Francisc	о 99-ра	r 99-par	981/2-991/	2 pare	991/2b
Washington,	D.C. 98-99	98-99	971/2-981/	2 98-991/2	971/2-981/

* 30 year, 5% down on first \$9,000

† 25 year, 7% down on first \$9,000

SOURCES: Boston, Robert M. Morgan, vice pres., Boston Five Cents Savings Bank; Chicago, Murray Wolbach, Jr., vice pres., Draper & Kramer, Inc.; Denver, C. A. Bacon, vice pres., Mortgage Investments Co.; Detroit, Stanley M. Earp, pres., Citizens Mortgage Corp.; Houston, Donald McGregor, exec. vice Agree, W. A. Clarke, pres., W. A. Clarke, Pres., W. A. Clarke, Pres., W. A. Clarke Mortgage Corp.; Houston, Donald McGregor, exec. vice Agree, Marcus, senior vice pres., American Trust Corp.; T. J. Bettes Co.; Jacksonville, John D. Yates, vice pres., Stockton, Whatley,

	V	A	4	1/25

					25	yr.
City	30 year, Imme- diate	no-down	25 year, i Imme- diate	2% down	5% down Imme- diate	or more
Boston local	par-101	par-101	par-101	par-101	par-101	par-101
Out-of-state	95-97	a	96-97	96-97	96-971/2b	a
Chicago	96-97	96-97	97-971/2	96-97	98-99	98-99
Detroit	95-96	95	961/2-971/2	96	97-98	97
Denver	a	a	981/2	98	991/2	98
Houston	96-97	97-971/2	96-97	961/2-971/2	98-99	98-99
Jacksonville	96-971/2	96-961/2	97-98	97	98-99	98-981/2
Kansas City	97	97	97	97	97-98	97-98
New York	99-par	a	99-par	99-par	99-par	99-par
Philadelphia	98°-981/2	98°-981/2	99	99	991/2-par	99-par
San Francisco	95-971/2	а	95-971/2	95-971/2	971/2-981/2	971/2-981/2
Wash., D.C.	97	96	97-98	961/2-971/2	971/2-99	971/2-981/2
						-

▶ Immediate covers loans for delivery up to 3 months; future covers loans for delivery 3 to 12 months.

▶ Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones.

Quotations refer to houses of typical average local quality with respect to design, location

Notes: **-prices to builders average 1½-2 pts, lower to cover origination fee and construction payout charges, a—no activity. b—very limited market at this price. c—covers typical package deal, with builder permitting only 10-33% of a block of mortgages as no-downs. d—price to builder adds ½ point; plus 1 point by veteran. e—quality homes. f—par for excellent locations only.

^{**} Represents a 715% increase in the dollar value of mortgages purchased in the second half over the first half

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How to free veterans who sell from liability

The House veterans affairs committee has figured out how to save GI home buyers from themselves.

(Most veterans do not realize that if they sell their house, they are still in hock to the government if the new owner defaults.)

Committee investigators turned up the fact that in 40% of 5,604 recent GI loan foreclosures the house sold for an average \$805 less than the balance of the veteran's debt. So the committee would:

- 1. Require the veteran to submit the name of the buyer to VA so the agency can check his credit rating.
- 2. If the buyer's credit is good, let VA consent to the sale and let the veteran off the mortgage. If not, let VA warn the veteran his buyer is a bad risk, so he will have only himself to blame in case of default.

Second mortgage rackets rapped in two states

Second mortgage scandals are brewing in New York and California.

In Los Angeles, members of a state assembly subcommittee decided that new loan brokerage regulations enacted in October are not tight enough. The new laws limit mortgage brokerage commissions to 5% for a one-year loan; 10% for a two-year loan and 15% for three years. But during three days of hearings committeemen heard testimony from persons who paid fees of 25-50% for their loans in addition to 10% interest.

The question was whether the October legislation had been given enough time to work. Some members of the Mortgage Bankers Assn. who dropped in to listen at the hearings thought it might have been wiser to wait awhile before studying the effects of the law. But they heartily endorsed the committee's efforts to "knock these sharpies out of being."

MBA members also complained about the attention given the Independent Mortgage Bankers Assn. by the newspapers. "They are not bankers, but brokers," said one MBA member. "Independent is about one year old, but the similarity in names causes our organization to be confused with theirs in the public mind. They are using the name we have tried to build during the past 25 years."

In New York, Atty. Gen. Jacob K. Javits moved against what he called a \$12 million loan racket in which home owners were being charged "astronomical" (but legal) interest rates for second mortgages.

The technique employed by certain lenders, said Javits, is to persuade a home owner to take out a second mortgage on his home at the usual 6% interest. At the same time the home owner is talked into incorporating himself. The loan is then made to the corporation. But the corporation gets only a percentage of the loan. The rest goes to the lending agency for "expenses" while the home owner is obliged to pay interest on the original sum borrowed.

FEBRUARY 1956

Eisenhower would curb public housing, liberalize repair loans

President Eisenhower made these recommendations for housing in his state of the union and budget messages to Congress last month:

1. Build 35,000 public housing units a year for the next two years, but limit it to cities with HHFA-approved workable programs for an overall attack on slums. This tie-up was part of the Housing Act of 1954, but the Democratic-controlled Congress killed it last year, to the dismay of many of the men who fathered the concept

of urban renewal (Oct., News).



EISENHOWER

- 2. Give elderly persons a "limited preference" for public housing and permit admission of elderly single persons. There is no legal bar to admitting elderly couples now, but since the law gives veterans a preference, hardly any old people get in.
- 3. Pass a new law to help private industry and nonprofit groups build housing for the elderly. The President suggested no details. A bill sponsored by Sen. John J. Sparkman (D, Ala.) calls for 10,000 public housing units for each of the next five years for married oldsters and a new FHA Sec. 229 with 95%, 30 year loans for persons over 65. Another measure sponsored by Sen. Frederick G. Payne (R, Me.) would provide the

elderly with 15,000 public housing units a year.

- **4.** Liberalize FHA Title I repair and remodeling loan terms, and make this a permanent FHA program. Eisenhower cited no specifics, but he wrote Rep. Glenn R. Davis (R, Wisc.) that he was in sympathy with his bill to raise the loan limit from \$2,500 to \$3,500 on individual houses and up amortization from 3 to 5 years.
- 5. Authorize another \$100 million for college housing loans, but at a higher interest rate. The formula imposed by the last Congress cut interest from 3.25% to 2.75%—less than it costs the Treasury to borrow the money—and virtually drives private lenders from the field.

 NEWS continued on p. 46

Jack Urwiller, Sacramento Bee



Flood insurance proposed after new floods

Coming so soon after the disastrous New England storms, the holiday floods in northern California, Oregon and Nevada strengthened prospects for federal flood insurance.

The western floods also provided object lesson in why private insurance companies say flooding is not an insurable risk. The homes pictured here were built on the stream side of the Sacramento River levees north of California's capital city. That is Just where flood waters are supposed to accumulate. But since completion of mighty Shasta Dam has tamed the once treacherous Sacramento River, many a venturesome (or foolish) resident has built his home on riverbank land still subject to flooding.

Owners may have thought the view was worth the obvious risk. "I think most of us knew what we were doing," said one home

owner. He and others who built homes on the low-lying river edge had been warned by the state reclamation board when their plans were announced. But the board's only power is to see that new structures do not interfere with the levee.

Now President Eisenhower has asked Congress to set up a five-year, experimental flood insurance program involving \$3 billion. Bills introduced in both houses call for the federal and state governments to join with private insurance companies to provide protection at reasonable cost. An individual policy holder would pay 60% of the cost, the government (and therefore all taxpayers) the rest. Top damage claim: \$250,000 per person, with a \$300 deductible clause plus 10% of the claim to avoid "nulsance cases." HHFA would run the show.

Big jump in urban renewal, military housing predicted in budget; FNMA selling foreseen

In his budget message to Congress, President Eisenhower disclosed that:

The administration is counting on a spectacular increase in military housing and urban renewal activity by FHA. His budget message said the Defense Dept. expects to "arrange" for 100,000 military housing units during fiscal 1956 and '57 under the revamped FHA Title VIII—provided Congress extends it. So far, FHA has not committed a single unit, although the law was passed last year.

Eisenhower predicted applications for FHA urban renewal mortgage insurance will rise from "less than 2,000 units" in fiscal 1954-55 to 75,000 units in fiscal 1956-57. FHA budget men explained they are counting on a jump from 652,000 units insured in the current fiscal year to 731,950 in the fiscal year ending June 30, 1957. The boost would be military and Sec. 220 and 221 renewal loans.

Fanny May plans to dump as much as \$250 million of its portfolio—including perhaps \$150 million from its old mangement and liquidation portfolio—onto the private market before June 30, 1957. Implication is that the administration is banking on a vastly improved mortgage market in the meantime. Fanny May stopped selling its liquidation holdings last October in deference to the money squeeze. The budget forecast FNMA purchases under its secondary market operations would rise from \$100 million now to \$290 million by the end of fiscal 1956-57. But sales are expected to exceed purchases by \$255 million.

Levitt, Carrier sign a giant contract, predict air conditioning 'breakthrough' in '56

Will 1956 go down as the year when air conditioning became a must in mass home building?

Yes, predicted Builder William J. Levitt and President Cloud Wampler of Carrier Corp., as they sat in the spotlight before a big roomful of newsmen, press agents and builders to sign the biggest single contract yet for residential air conditioning. It calls for delivery of 702 four-ton coolers as standard equipment in Levitt's \$18,900 "Country Clubber" homes.

Wampler called the contract a "major breakthrough into the volume housing market. It will go far to establish central air conditioning as a must for the volume builder. And when that happens, it follows it will become a must for all homes."

Levitt agreed. Said he, characteristically: "If Levitt goes air conditioning, the building industry goes air conditioning. It's as simple as that."

Whether or not is is that simple, the deal should have wide impact on merchant house building. Long the biggest, Levitt is also one of the most copied builders. It is noteworthy that when he decided on standard air conditioning, he avoided corner-cutting, picked a system ample for cooling his worst oriented house, paid particular attention to good ductwork (which involves about 15% of the cost, but is responsible for 85% of air conditioning problems).

By risking a decision that may involve as much as \$1 million, Levitt is probably getting for about \$1,400 a house what could cost many a builder \$1,600 to \$2,000.

For technical details of the Levitt installation see col. 3.



CLOUD WAMPLER (ON LADDER) AND LEVITT SHOW FIRST CUSTOMERS MOCKUP OF HOUSE



NEWSREEL RECORDS BIG CONTRACT

How Levitt air-cooling system will operate

In 1953, Builder William J. Levitt experimented with a $1\frac{1}{2}$ h.p., \$500 air-conditioning system as optional equipment in about 400 of his \$10,000 Levittowner homes. He later gave it up, apparently after concluding it was too soon to air condition that price house.

For his second venture into air conditioning, Levitt picked a house nearly twice as expensive, a unit nearly three times as large. He chose Carrier's 5 hp., 4-ton unit, and, moreover took pains to devise a conspicuously sound duct network. The air-cooled compressor-condenser will go in the garage floor, with the fan and coolingcoil unit ceiling-mounted in the attic space overhead. Cooled air will be ducted to ceiling diffusers in the kitchen, living room and dining area, and to grilles over the doorways of the three ground-floor bedrooms. Capacity is big enough to provide conditioned air for the 1,100 sq. ft. expansion attic, too, which has space for two more rooms and a third bath.

Cheaper installation

Putting the air-handling unit at the garage ceiling keeps it closer to the compressor than many a builder manages in similar houses, thus saves money. Using prefabricated glass fiber ducts should cut labor costs for installation (air conditioning equipment itself usually runs only 50 to 60% of the cost of air conditioning a house). The system has a fresh air intakeoften omitted by cost-conscious builders but a boon in winter in homes heated by hot water. Levitt has not shifted from radiant heat, so the air conditioning is a completely separate system. He will put a return-air grill at the foyer ceiling near the middle of the house where it can suck air from surrounding rooms. It would have been cheaper to put the return grill in the wall between the living room and garage to reduce ductwork, but this would probably have created uneven air flow.

The \$18,990 "Country Clubber" has 1,550 sq. ft. on the first floor, plus a two-car garage, slate patio, and 12,000 sq. ft. of landscaped grounds. Last year, Levitt was selling it un-air conditioned for \$17,500. Both Carrier and Levitt kept mum about the amount of money involved in their contract, but experts think it is probably about \$60,000—close to the dis-

tributor price for the equipment involved. All told—including wire, piping, thermostats, ducts and installation—House & Home estimates air conditioning will cost Levitt between \$1,250 and \$1,400 per house—or just about what he is hiking the price. But many another builder pays \$1,600 to \$2,000 for the same size air con-

ditioning system. Levitt buyers apparently will get a bargain.

How long will it be before Levitt and other builders air condition all their models—not just expensive ones? Says Levitt: "We know we are only a short step removed from that.... The only problem is to bring down the cost."

Big insurance companies still hold most of VHMCP's \$92.5 million of loans to date

▶ Voluntary Home Mortgage Credit Program loans reached \$92.5 million the last week in December.

For the last three months of the year, placements were running at an annual rate of \$200 million.

▶ VHMC placed 11,059 loans through Dec. 31—ten months after it actually got going—including 1,398 committed on applications from builders (almost all for non-white projects).

The credit program was, in short, working a lot better than many a critic thought it would, thanks largely to the energetic efforts of some big insurance companies and to the talents of its young (33), Harvard-educated boss, Arthur W. Viner.

Now the big unanswered question is: are the big insurance companies shouldering an inordinate share of the lending?

Viner splits his ticket on this one. In the past he has said outright: "Too few lenders are making too large a share of the loans....

Too many lenders are making only a token contribution to the program." Up to last October, Prudential accounted for 30% of VHMCP business. Recently, Viner has evolved a defense for the big investors. His argument is that the ten big insurance companies with the largest holdings of VA and



VINER

FHA mortgages have taken a proportionate share of VHMC loans. (Prudential at the end of '54 held \$2.4 billion worth of FHAs and VAs, more than twice what New York Life held in third place and more than ten times Bankers Life's total, in tenth place.) Together, these companies hold about 66% of all FHA and VA paper in the hands of insurance companies. And they have taken about this percentage of VHMC's volume, says Viner. He figures it is a fair proportion.* "Besides," he adds, "some of the smaller ones are doing a marvelous job."

Back when VHMC was first getting organized, Philadelphia Mortgage Banker William A. Clarke commented: "The lending fraternity got itself really over a barrel

* Nobody ever made any bones about the fact that the big insurance companies were going to participate heavily in VHMCP. When President Carrol M. Shanks of Prudential first outlined the plan to the Senate banking committee in 1954, he said: "We have made a canvass of the life-insurance business and the plan has the backing of the big majority of life companies."

when it said there is no necessity of government money."

If the life insurance companies continue to support the program—and if Viner can get more savings and loan associations and savings banks in on it—the lending fraternity should be able to roll itself off the barrel. Reported Viner to the Mortgage Bankers last fall: "If the program continues to enjoy the success it has now achieved your biggest competitor, the government, will be gradually removed from the scene."

One area from which the government might some day disappear: the VA direct loan program. All requests for VA direct loans are sent first to VHMC, which has 45 days in which to find a lender. VA is making a study to determine whether it can declare some sections ineligible for direct loans. The administration is counting on results. Said President Eisenhower in his budget message: "New commitments in 1956 and 1957 [for VA direct loans] are expected to be lower than in 1955, largely due to the success of VHMCP."

NAREB to hire field staff to push fixup campaigns

NAREB is hiring six field men to help local real estate boards push rehabilitation.

The plans were approved by the real-tors' board of directors at their mid-January meeting in Washington. NAREB is making promotion of rehabilitation—its "Build America Better" plan—its major program this year. The 56,000-member association has budgeted \$150,000 for the drive (in place of last year's \$25,000).

The field force will work under a new field service department headquartered in Chicago (director and one field man) with zone offices in Washington (two men), Lincoln, Neb. (two men), and Los Angeles (one man). Eugene Conser, NAREB executive vice-president, told House & Home the field men will take a three-week training course, then follow a route of scheduled one-day visits with local realty boards. They will help plan and promote local conservation, urban renewal and home fixup drives, suggesting how tested formulae can be adapted to local situations.

Conser said the \$130,000 remainder of the \$280,000 extra income NAREB will have this year as a result of a \$5 dues increase voted at last year's convention (Dec., News) will be split among public relations, education and research.

Charles T. Stewart, NAREB's longtime public relations chief, is taking on added duties and title as manager of its department of public affairs (lobbying, public relations, research).

NEWS continued on p. 48



VHMCP finances \$8,500 Negro housing tract

One of the largest projects yet started under the Voluntary Home Mortgage Credit Program is a Negro subdivision taking shape on 240 acres of wooded land in Shreveport, La.

R. P. Farnsworth Inc. of New Orleans is building the first 130 homes (most of them are already sold) on the 1,000-lot tract. Hollywood Development Corp., which organized the project, is a subsidiary of Texas Industries Inc., Dallas masonry block manufacturer whose products are used extensively in the 800 to 950 sq. ft. houses.

Dallas Architect Thomas Scott Dean "engineered" the houses to cut costs, pared Texas Industries' original estimate of \$7,700 for the basic house to \$4,750. Texas Industries will sell the package to the building

corporation at that price. Dean has eliminated waste to a point where he figures he has about 1.6 sq. ft. of plywood left over on a house and about 5¢ worth of sheetrock. He says total cost of the masonry in the house is \$452. The homes will sell for \$8,500 or \$10,000, depending on whether they have two bedrooms or three.

The subdivision stemmed from a report by the Shreveport Council of Social Agencies showing an acute need for non-white housing in the city. (About 40% of Shreveport's population is Negro.) Financing stalled until three bellwethers of the VHMC program—Metropolitan Life, Prudential and New York Life—agreed to share the mortgages for the first phase of the project.

COMMUNITY FACILITIES

Rules get stiffer; federal study hits theory homes don't pay way

If homebuilders' sufferings a year ago with community facilities' problems could be likened to a bad cold, the ailment looked more like pneumonia last month.

More and more communities all over the country were tightening up rules on schools, sewers, septic tanks, lot sizes, park fees, street specifications. In northern New Jersey, one mortgage man said upgrading by municipal regulation had made construction of homes under \$15,000 impractical, made the \$19,000 three-bedroom house typical.

The outlook was for nothing but more and more trouble. Predicted Herbert H. Smith of Princeton, N.J., one of the East Coast's leading land planners: "Planning and zoning will continue to accelerate their spread. Attempts will be made to place the costs of new school facilities directly on new developments."

The Urban Land Institute analyzed subdivision regulations in 115 cities and 49 urban counties, reported a marked tightening. But the institute also noted "increased recognition" that builders should not be charged for big items like schools, parks or trunk sewers.

Septic tanks stir up new restrictive zoning rules

New septic tank restrictions are being enforced in Racine, Wisc., parts of Florida and Chicago's Cook County.

Charles F. Chaplin, Cook county building commissioner, pushed through two emergency measures against septic tanks in unincorporated areas. The first orders the zoning board of appeals to postpone consideration of new subdivisions with lots of less than 20,000 sq. ft. on which septic tanks are to be used. The second orders a builder who installs a septic tank to post a \$2,500 bond.

Chaplin was exuberant about the board's action. "It was passed unanimously," he stated. "For any builder to get a septic tank approved, he has to post a \$2,500 bond for each tank guaranteeing it will operate well for two years. The builders didn't know what it would do to them. Now they're all up in arms. It turns out nobody will give them a performance bond because who would be silly enough to guarantee a septic tank to work that long? So to use septic tanks they have to put up \$2,500 in cash in escrow for two years. It's completely stopped septic tanks except for a few builders who are putting up big houses on large lots of about two acres. . . ."

The county board in Racine, Wisc., concerned at the rate at which urbanites were spilling into its territory, passed similar square footage laws. Minimum lot size on agricultural land is now 20,000 sq. ft. For residential land, it is 15,000 sq. ft. if a septic tank is used, 10,000 sq. ft. if the home is fied into a treatment plant.

In Florida, FHA cut its close ties with the state board of health after a disagreement over septic tank policy. FHA told builders it was no longer necessary for them to have approval of the state board to install a tank. Formerly, state health authorities checked all such installations (except in Dade county, where FHA discontinued the practice several years ago), consistently ordered sewage disposal systems in new developments. Now, said FHA, its offices will issue commitments if the builder has the approval of the local health department.

No building permits unless streets are in, rules town

Huntington, Long Island, a once quiet town of 75,000 which has had a mass building boom only in the last two years, adopted an unprecedented set of site requirements. Biggest hurdle for builders: They must install streets before they can get building permits.

The action was approved by the town after a public hearing attended by 100. Builders were outvoted.

The law says that streets must be finished before permits are granted except for 1½" asphalt surfacing and placement of street signs, monuments and landscaping. Some other revisions:

- Streets must be 34' wide instead of 29'.
- Concrete curbs are now required for all streets. They must be 18" deep, 6" thick at the top and 7" at the bottom, with straight sides.
- Builders must pay fees to the town in lieu of land being set aside for park or playground areas. Examples: \$150 for each 1- and 2-acre lot developed; \$50 for a
- Street trees must be planted along both new and existing streets.

Worried Long Island builders hoped the

Huntington regulations would not start a trend on the island. They said it would force typical builders to tie up \$100,000 in street improvements before grading for a foundation, much less selling a house.

REVIEW:

Small houses may not mean net loss to towns

THE COST OF MUNICIPAL SERVICES IN RESIDENTIAL AREAS. By William L. C. Wheaton and Morton J. Schussheim. 105 pp. Prepared by HHFA, published by Dept. of Commerce, Office of Technical Services, Washington, D.C. \$2.

It is not necessarily true that new, small homes cost a city more for community services than they return in taxes.

On the contrary, say the authors of this HHFA-financed research pamphlet:

"A more careful analysis may show that addition of houses may result in a total revenue return to the community equal to or in excess of the total cost of servicing the houses. For example, in most cases only about one half of municipal costs are paid for from revenues derived from the local property tax. Other forms of municipal income, including grants from state and federal governments, have been and probably will continue to be substantial. School, sewer, water and other special districts, county governments and metropolitan districts often provide municipal services and draw upon special tax or revenue resources for the purpose."

Wheaton and Schussheim's study is good news for builders fighting such bugaboos as compulsory school levies and minimum acre lots. It is virtually the first scientific treatise in their favor that builders can cite in their growing struggle with suburban governments.

Efforts by snooty suburbs to isolate themselves or raise a wall of protection against "adverse influences" are "unlikely to succeed" anyway, the authors argue. They offer this warning to communities that use building codes, subdivision ordinances or zoning to prevent development rather than guide it: "To the extent that they seek to detach themselves, to prevent normal economic growth and to avoid normal develop ment, suburban areas may ultimately hasten their own obsolescence and they may raise rather than lower the ultimate costs of adaptation and change. While a few areas may succeed in preserving their character as distinctive upper-class communities for a few years, there is much evidence that the eventual changes are merely deferred and not prevented."

What should suburban towns do instead of fighting development?

Answer: guide it into the geographical areas where it will cost the least. Generally, that means concentrating home building close to developed areas and avoiding decentralization in a "widely scattered pattern." Scattering, warn Wheaton and Schussheim, means "unnecessary increases in municipal costs." And they add: "Economical development areas from the municipal standpoint do not appear to be significantly more costly to the builder"

-at least for capital outlays for new facilities

The study was made by Wheaton when he was at Harvard University's department of regional planning. (He is now professor of city planning at the University of Pennsylvania.) It was based on analysis of problems and possibilities for development in three Massachusetts towns: Natick (pop. 20,000), Wayland (pop. 5,000) and Newton (pop. 60,000).

Planner urges new way to save park space

How can the nation's fast-growing suburbs keep enough open land areas to retain some of the semi-rural atmosphere that brought residents there in the first place?

John Brewer Moore, assistant town planner of Montclair, N.J. thinks one answer is for suburban counties to adopt a new land policy. Now, US communities rely on public acquisition and ownership to preserve park spaces and other greenbelts amid the subdivisions. Instead, says Moore, they ought to devise ways to use private property for the same purposes.

To New Jersey League of Municipalities, Moore suggested two possibilities:

- 1. Let cities or counties buy only certain rights to park land leaving the rest to the original owner. For example, he might retain the right to farm or other uses requiring no structures.
- 2. Give the owner tax concessions in return for a contract requiring the land to remain green for a definite term of years.

Greenbelt farm zones bar home tracts in California

Greenbelt farm zoning-the idea of protecting farmland from hit-and-miss subdividing-is gaining a foothold in California.

Thirty counties are on their way toward adopting greenbelt agricultural zoning. Researchers for the California Farm Bureau Federation think it is only a matter of time before all 58 of the state's counties will vote farms similar protection against inroads of housing developments, freeways, quarrying and military establishments.

Under greenbelt zoning, farm land cannot be used for anything else without approval of the county planning commission and the county board of supervisors. If any land is taken for homes, the theory is that it must be at the perimeter. No more tracts amid orange groves. Says R. H. Sciaroni, farm adviser of San Mateo County: "Now everything is planned. The whole situation is beginning to make sense."

Greenbelt zoning also serves to keep county tax assssments on a farmland basis. Elsewhere, if a subdivision or other land use adjoins a farm, the higher rate of assessment can apply to the farm. Ultimately, the assessment gets so high farming is not profitable, and the farmer must sell out.

Some of the biggest farm greenbelts lie where homebuilders are most active, too. Sample: Alameda County (in the suburbs east of San Francisco) where 396 sq. mi. are already zoned or in process of being zoned agricultural.

Are FHA closing costs padded? Probe begins

Congress and FHA have begun probing into charges that closing costs on homes sold with FHA and VA loans are padded.

What bothers some members of the Senate housing subcommittee is that the amounts mortgagees say they must charge for originating loans tend to fluctuate with the mortgage market. When mortgage money is plentiful closing costs decrease; when it is scarce they begin to go up.

At the subcommittee's request, FHA last month ordered its field offices to make a detailed survey of closing costs on all mortgages written on single-family homes during the last half of December. The survey will delve into 23 ingredients of closing costs, including such items as mortgagee's initial service charge, mortgagee's appraisal fee, title search, attorney fees, credit reports, cost of photographs, escrow fees, taxes and hazard insurance premiums. FHA ordered separate reports on closing costs for new and existing construction and a breakdown of each into four price bracketsunder \$10,000, \$10,000-\$11,999, \$12,000-\$14,999, \$15,000 or more.

Some senators were predicting that the outcome of the investigation may be new legislation limiting FHA closing costs to a percentage of the mortgage plus an allowance for title search and local taxes and fees. VA already limits closing costs to 1% of the loan-not including taxes and title search.

Intervention by the Senate subcommittee

apparently overtrumps efforts by mortgage bankers to get FHA to clarify its closing cost rules administratively. Mortgage men say one of their biggest headaches has been the constant uncertainty as to what charges may legally be made. Not only are FHA regulations complex, but different lenders require different data.

FHA revamps its rule on sale of private utilities

FHA has stopped hoping it can make builders distribute among the property owners any profit from the sale of community water and sewerage systems. It has declared its old rule "impracticable."

Henceforth, owners of these privately built systems may pocket their gains in the event of a sale, provided FHA appraisals on the individual houses did not reflect the value of the services. This makes developers choose between pro-rating the cost of a self-contained system against their home buyers or leaving it out of the price structure of the houses.

The new order became effective December 14. It covers only privately-owned systems where there is no adequate public regulation of utilities (notably Texas and Florida). Initial crackdown last March resulted from complaints that home owners were being forced to buy their utility systems twice—once as part of the price of the house and again when the local government taxed them to recapture what it had paid private developers for the sys-

Operation Home Improvement gets sendoff; Sears bids for 'one-stop' repair trade

Operation Home Improvement got a thumping sendoff Jan. 16 in Washington.

A daylong conference brought out some 450 housing and government VIPs, including such hard-to-get notables as Presidential Assistant Sherman Adams OPERATION

the year to FIX

and six other White House staffers.

The dignitaries heard HHFAdministrator Albert M. Cole proclaim 1956 as Home Improvement Year — "a great

THE IMPROVE national crusade to raise the level of living" in the US.

Cole read from a letter by President Eisenhower pledging government support for the \$150,000 private promotional campaign to induce people to spend more repairing, maintaining and improving their homes.

The President called "renewal and restoration on a national scale of old but still sound dwellings" one of three "major goals" of his administration in housing. (The others: a modern home for every family that can afford it via private enterprise, better housing for low income families through private enterprise and government aid.

The one-year promotion, sponsored by the US Chamber of Commerce, has the financial backing of more than 50 building materials manufacturers, trade associations, national magazines and other business firms. The Chamber hopes that the present annual US expenditure for home maintenance and improvement (which it optimistically puts at \$12 billion) can be stepped up from 25

From its New York headquarters (10 Rockefeller Plaza), OHI is concentrating on giving manufacturers, lumber dealers, builders, realtors and lenders advertising and display kits, sound film strips and other aids to use in their regular promotion. Executive Director John R. Doscher told the Washington session that OHI's seal (see cut) will appear this year in \$50 million worth of national and an estimated \$250 million of local advertising. At least 11 cities have appointed local committees to push the OHI idea, he said. They are: Seattle, Oakland, New Orleans, Chicago, Topeka, White Plains, Buffalo, Denver, Rocky Mount, Cheyenne, St. Louis.

Sears Roebuck opened OHI information booths in 700 retail stores across the nation. They are stocked with literature to guide home owners in smartening up their houses. It was, clearly, a major bid by a retailer to move toward the beckoning 'onestop fixup' market. Retail Sales Manager Fred C. Hecht announced stores would have one to ten booths, depending on their size.

NEWS continued on p. 50

PEOPLE: Annabelle Heath named to HHFA post; Builder Mark Taper buys a California S & L

Miss Annabelle Florence Heath, aide to HHF-Administrator Albert M. Cole when he was in Congress and recently his executive assistant, became HHFA's No. 4 assistant administrator. She is supposed to "strengthen

coordination" between HHFA's subordinate agencies - especially for its limping urban renewal program. The other assistant administrators: Lewis E. Williams (administration), Carter McFarland (plans and programs) and William J. Ulman (public affairs).



MISS HEATH

Miss Heath, blueeyed and 39, comes

from Cole's home town in Kansas (Holton). She accompanied him to Washington as secretary when he went to Congress in 1945. Cole's action making her an \$11,610-a-year assistant administrator seemed to most observers a logical example of the typical Congressional approach to trusted and loyal helpers: keep such aides close at hand. Miss Heath attended the University of Texas and formerly was with the American consulate in Frankfurt, Germany.

A group headed by Big Builder Mark 5. Taper purchased control of Berkeley Savings & Loan Assn. in Berkeley, Calif. The association was founded in 1922, has assets of \$21 million and branch offices in Walnut Creek and Centerville. Taper's associates in the purchase are Atty. Arch MacDonald of Oakland and Reece H. Dorr, vice president of American Savings & Loan Assn. They bought Berkeley Savings from Atty. Robert D. Frazier, who has controlled it for the past two years. Berkeley's president, E. Roland Young, is resigning to become executive vice president of San Francisco Savings & Loan Assn., largest in the bay area.

HHFA gives four awards.

The housing agencies, which cannot give their ablest civil servants the kind of salaries they might command in private business, gave four of them distinguished service awards. HHFA said the new awards (bronze plaques) will be presented annually to a few outstanding employes. The first winners:

A. M. Prothro, director of FHA's legal division and acting general counsel, who during a period of "reorganization and investigation . . . undertook new and varied assignments far beyond those ordinarily assigned to one person."

Carl H. Burke, chief of FNMA's procedures branch, who adapted to FNMA requirements a "system of control accounting which was directly responsible for saving the government approximately \$250,000 a year.

Frank L. Willingham, assistant general counsel for PHA, for "developing and promoting substitution of private investment for federal lending on interim financing . . ."

(PHA has reduced its federal borrowings from a peak of \$940 million in January '53 to \$55 million as of October '55.)

Arthur W. Viner, executive secretary of VHMC, who "was responsible in a few short months for successfully organizing the Voluntary Home Mortgage Credit Program and implementing its basic policies of administration and operation. . . . " (See p. 47.)

Bovard v. FHA (cont'd)

Burton C. Bovard, fired as general counsel for FHA a year and a half ago on the ground he failed to crack down on repair gyps and windfallers, was still fighting for reinstatement. He apparently won the fight last autumn when the appeals and review board of the Civil Service Commission ruled that Commissioner Norman Mason's charges against him contained "substantial defects" (Nov., News et seq.) and ordered Bovard reinstated. Then Mason exercised his right to reopen the case with CSC. In December, the commission reversed the decision of its board of review. Latest action: Bovard's lawyer, Clayton L. Burwell, announced that the case would be appealed to Federal District Court in Washington.

New men at FHA

H. Kingston Fleming, former newsman and State Dept. official, was appointed public information director of FHA. He succeeded W. Herbert Welch, now assistant to FHA Commissioner Mason for liaison with Capitol Hill.

British-born Fleming came to the US in 1923 at the age of 24 and joined The Baltimore Sun. In 1941 he was managing editor. In 1943, he joined State, where he was successively assistant chief of three divisions. In 1951-53, he was general manager of the Institute for Advanced Study at Princeton.



FLEMING

In Topeka, Kan., Attorney Frederick . Mann, 46, was named state FHA director succeeding Richard B. Clausing.

HHFA's Urban Renewal Administration named an assistant commissioner for operations: Harold F. Alderfer, head of the political science department at Pennsylvania State University.

The high-rise Levitt

Alfred Levitt, long the design expert of the Levitt & Sons family homebuilding team, switched to middle-income apartments in New York City. Having parted business company with his older brother, William J., Al Levitt was putting up a \$16 million development of 40 eight-story buildings to house 1,280 families in Queens-conventionally financed. They will rent, he said, for \$37 a room.

To Al Levitt, most New York apartments are "monsters that look like institutions. You live in a filing cabinet." His formula for averting the filing-cabinet look while paring costs: no red brick, a cantilevered steel framing system using half as much steel as is common in the area, curtain walls with much glass (instead of basements), cinder-block spandrels and painted cinder-block walls without plaster between apartments, asphalt tile floors. Other touches: only 18% land coverage, two community pools, and-Corbusier-like -ground floors left open as covered terraces and rainy-day playgrounds.

Says Al Levitt: "Once the Levittown house was standardized, I had designed myself right out of a job. And I got bored."

T. Bert King, former chief loan guarantee officer for VA, left National Homes Acceptance Corp. last month after almost exactly a year as vice president. Explained King: "It was probably a question of my not having the same ideas." He was considering opening his own research consulting office in Washington, had also been offered jobs in New York and Chicago.

Local elections

Tax Consultant Sylvanus G. Felix, who doubles in home building and law, was elected president of the Oklahoma City Home Builders Assn. Felix, a good-humored ex-football star who has been tackling taxes for years, is nationally known for his articles and lectures on the subject.

Other new presidents among NAHB chapters: Irvin A. Blietz of the Chicago Metropolitan Home Builders Assn. (succeeding George Arquilla), and his son, Bruce Blietz, who now heads the association's Young Builders Council, succeeding Ralph Smykal; Charles W. George, president of the Milwaukee Builders Assn.; Mayor John F. (Jack) Beatty of Bal Harbour, Fla., the Home Builders Assn. of South Florida; Sol Kuperman, Rockland County (N.Y.) Home Builders Assn., succeeding H. Eugene Ellish.

In California, R. Reese Myers succeeded Walter W. Keusder as president of the Home Builders Institute of Los Angeles; John Ross Glass, 34, was elected president of the Los Angeles Realty Board, succeeding Fred W. Marlow; Paul R. Hunter is the new president of the southern California chapter of AIA succeeding William Balch; Harold E. Parker was elected president of the General Contractors Assn. of Contra Costa County.

DIED: Architect Ernest W. Jones, 67, who practiced in New Orleans for 50 years and was a past president of the Louisiana Architects Assn., Dec. 17 in New Orleans; Alvin Lorber, 59, president of Suburban Homes, Inc., Milwaukee builders, Dec. 21 in Milwaukee; William David Perkins, 55, Louisville real estate dealer and mortgage broker, Dec. 31 in Louisville; Joseph Zeno Burgee, 58, partner in the famed Chicago architectural firm of Holabird & Root & Burgee, Jan. 4 while on a business trip in New York; Allen B. Peters, 77, founder of the Cincinnati Sash & Door Co. in 1903 and its president until 1952, Jan. 6 in Cincinnati.

OPINIONS

These intellects shed the following light on matters of moment to housing:

Sen. John J. Sparkman (D, Ala.), in talk to Prefabricated Home Manufacturers' Institute:



'A builder who erects a project solely with the idea of profits without any consideration for the future health, welfare, social and moral needs of the eventual owners may very well be giving birth to a monster which will adversely affect the economy of the community. Such an operation may severely reard... the standards of living we are trying o achieve ..."

The Brooklyn Studio

Clair W. Ditchy, FAIA, president of the American Institute of Architects:

How sad it is, to see virgin countryside olighted, desecrated by coarse, uncouth developments—endless rows of uninteresting couses which afford their owners merely a rude container for a collection of modern abor-saving devices, and the minimum number of rooms, all of the minimum size required by law [sic]."

Roger Dudley

Fredrick J. Close, market development manager, Aluminum Co. of America:

Monumental-institutional building is the asiest place to break in a new idea. From nere they seem to filter down. . . . Eventully, I predict, if we all do a good job, metal ralls and roofing, requiring practically no naintenance, will be used rather extensively the residential field."

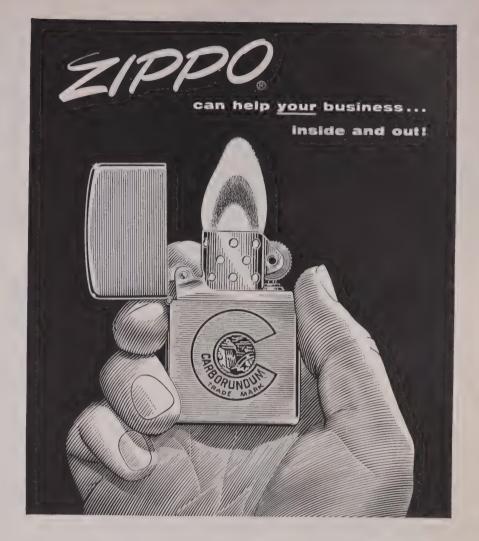
Bob Fores



HHFA dministrator Albert M. Cole, in talk to the nation's mayors:

"Unless improvements [in slum-ridden ities] are made across the board—and here the have the essence of planning—they will be largely wasted. . . . There is still time. It is year remains, perhaps two or three years. But if we lag and postpone, if we have not year 1960 begun to take across-the-board across, it may be too late. The people of any it without a comprehensive plan of action ander way within the next five years will be municipal bankruptcy in 1965."

NEWS continued on. p. 61



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PROVEN QUALITY YOU CAN TRUST

Code enforcement spoils market for slum housing in Philadelphia

Price of tenement units dives 50 to 75% in year. Big operators stay in business, but small ones begin unloading holdings at any price. Officials say they face big relocation problem

A single year's enforcement of its new housing code has knocked the bottom out of the market for slum property throughout Philadelphia.

Since the city opened an attack on its 700 blocks of slums by concentrating inspections and citations in a 21-block area, prices for tenement dwellings have dived between 50 and 75%. The reason: removal of illegal overcrowding and forced repair work has either drastically reduced income for such property or raised the maintenance cost.

There are plenty of sellers, but few buyers. And those who are still buying consider their purchases sheer speculation, not the sound, high-yield investment they once were.

Some landlords are pulling units off the market. Some who had converted old single-family houses to multiple uses are evicting tenants and reconverting. Others—mostly small operators—are going out of the housing business as fast as they can. It is logical to theorize that dropping prices may cut land cost in slum areas so much that much less federal subsidy will be required for redevelopment. But the trend is too young to prove this yet.

Philadelphia provides what is probably the nation's most dramatic example yet of how quickly a determined city can take a big chunk of the bootleg profit out of operating slums. Realty men have long argueed that if the profit disappears, so, in time, will the slums themselves.

The Philadelphia story—and some of the still unsolved problems it has spawned—should be studied by every builder, realtor and civic official who hopes his city will do something effective about stopping the spread of blight.

Small property owners say they can't get mortgages to finance repairs, FHA shuns Sec. 220 loans

Philadelphia's year-old housing code is one of the nation's four or five sternest.

Among other things, it requires threepiece toilets in neighborhoods where outdoor privies have served for generations. It requires hot water, and, in multiple dwellings, extra baths where one had served for decades. It bans portable heaters. It sets up space requirements (see p. 64).

In many a city, slum housing is one of the most profitable investments available. Realty experts in Oakland, Calif., for instance, recently told a delegation of HHFA officials inspecting its urban renewal program that an income of \$3,600 a year on \$9,000 investment in tenement dwellings was "common."

It is a different story in Philadelphia:

"People are staying away from the market and mortgage money doesn't exist for this kind of housing," observes David Goldsmith, office manager for broker-agents Diamond Liss & Goldberg in Philadelphia. "There are plenty of sellers, most of them owners of four, five or six properties who have been living off the income from them and just don't have the money to rehabilitate. But even the big boys wouldn't quibble over price if they got an opportunity to sell."

The big operators have been better able to hang on than small owners. Some are going ahead pretty well with the called-for improvements-facing what they believe is the inevitable—while others are squeezing every day of delay they can from the city.

The small owners, however, will unload at any price. Edward H. Gornish, an ownerbroker, says he paid only 25% to 60% of the properties' former value on the deals he made last year. "I bought a little more than I did last year [1954], because of the low price," says Gornish. "But the small operators—the men who pick up a property here and there as an investment—aren't in the market today. . . . I would say that there has been a 200% to 300% increase in the number of people coming into my office wanting to unload."

But brokers, says Gornish, are now growcontinued on p. 64



Big demand for fixed-up units at twice old rent

It took money to renovate these six singlefamily row houses on Iseminger and South Sts. (in the pilot area) to make them meet the provisions of the housing code. Old dwellings (above) were smartened up inside and out (in lower photo, Mrs. Alice Lipscomb stands in front of her renovated home). The fixup job does not appear to have changed the face of the neighborhood, but it is a start.

Lenders would not touch the project, so the owner paid for the work. It cost KSFS Realty, Inc. \$22,000-\$3,666 per dwelling-to replace bad walls and floors, install baths, hot-air furnaces and hot water heaters and paint the buildings inside and out. Units formerly rented for \$23 to \$28 a month. Now the owner hopes to get \$45 to \$50 for them. David Goldsmith of Diamond Liss & Goldberg, managers of the property, says there were three vacancies when the work started-it was done around the tenants-and he has had 12 applications for them. "That was without putting up any signs," he adds. "If we'd put up signs, we would have had 40 to 50 applications." All applicants must be approved b a neighborhood committee which has been organized to improve the neighborhood. The owner has ten similar projects of from six to 16 buildings, says Goldsmith, but not enough money to handle them the same way.



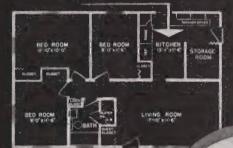


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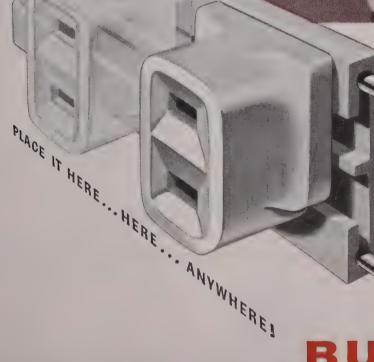


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You'll find, too, that Electrostrip is neat, easy to install in any room, eliminates outlet planning. It's listed by UL, rated at 20 amps, 125 volts A.C.

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continued from p. 61

ing reluctant to take on management of slum properties.

Some slum owners are frank to say that since the city is taking the profit out of operating tenements, they prefer to tear them down, put the money to other uses.

One owner who preferred razing to repairs is the Charles Eneu Johnson Co., a printing ink firm at 10th and Lombard Sts., just east of the pilot area. For 30 years, the Johnson firm has been acquiring twoand-a-half and three-story properties nearby. The idea was room for future expansion. Meanwhile, the 16 buildings were split up into 64 dwelling units renting from \$12 to \$20 a month. They had central heat, but no baths, no hot water. When the code was passed, the firm served eviction notices on the 160 occupants. Now, the last house is down. Says a company official: "We wanted to spend our money for a new ink plant rather than bathrooms."

This trend is strengthened by the results of prosecutions. Some 19 properties with 28 units have or will be vacated as a result of prosecution. Six other units are being vacated because of conversions.

Many, but not all, evictions represent small property owners who do not have the money for rehabilitation and cannot get the mortgage which would provide it.

Milton Hollander, one of the more progressive slumlords, says this inability to get money is putting some owners in the position of violating the law against their wills. Says he: "There are two types of landlords in the area—those who own a number of properties and others who have only one, two or three. In both cases, Philadelphia banks are reluctant to lend money for improvements. They feel the old buildings are a bad long-term risk."

Hollander thinks the only solution is for 40 year FHA Sec. 220 loans. He thinks this would let the bigger landlords buy out the smaller ones who depend on rents for their living expenses. But several conferences between city and FHA officials have turned up nothing in the way of a rehabilitation area where FHA is willing to stick its neck out. This operates to drive down the price of slum housing still more.

"I know of a four-story row house with

continued on p. 68

Now...for less money

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That power-packed Onan Model 205AJ on the construction site above, delivers 2,500 watts of A.C. power, enough to operate several electrical tools or floodlights simultaneously. Powered by an Onan 4-cycle gasoline engine, it has all the 4-cycle advantages of quick starting, long life and easy maintenance, yet it weighs only 154 pounds. and costs less per watt of output than any electric plant in its size range.

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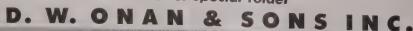
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- At least 150 sq. ft. of habitable floor area for the first occupant of an apartment; 100 sq. ft. more for each of the next three occupants and 75 sq. ft. per person thereafter. (These conditions are more stringent than those in New York's new code—see Jan. News.)
- Heat and hot water for all units. Portable equipment using gasoline is prohibited.
- Electricity if the building is within 300' of a power line and at least two outlets in every room in such cases.
- A window in every habitable room.
- Separate bathroom with flush water closet and lavatory basin; tub or shower required for most units.

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Write to Rheem Manufacturing Company, 7600 S. Kedzie, Chicago 29, Illinois. Dept. HH2.

continued from p. 64

an 18' front on the edge of the area," says Hollander. "It has a new front wall which cost about \$1,000. Yet the house sold at auction for only \$1,250. Four years ago I would have paid \$4,000 for it."

Another house which Hollander managed (he owns 20 and manages another 20) had a \$3,000 mortgage on it. When the owner came up against the housing code—he was in the first group prosecuted by the city—he elected to evict the tenants and return the property to the mortgagee. Says Hollander: "Two or three years ago, that house was worth \$5,000."

How Philadelphia enforced its new housing code

"We picked the area because it was one of the worst in the city. It turned out to be worse than we expected."

That is Deputy License Commissioner John J. Higgins' description of the pilot area chosen by City Housing Co-ordinator William L. Rafsky for a first all-out test of the new housing code. They named the test Operation Hawthorne.

Five housing and fire inspectors and one building inspector were assigned to dig up all the violations they could in a 21-block area in South Philadelphia inhabited by 7.000 persons (most of them Negroes) living



DEPUTY COMMISSIONER HIGGINSThe slums were worse than expected

in 1,487 buildings. In two months the team turned up 9,000 infractions in 1,315 buildings, ranging from multi-violation cases involving complete condemnation (two buildings) to loose wallpaper.

Next step: enforcing compliance with the

provisions of the new code.

Officials fell to arguing over the proper length of time a landlord should be given to comply. A majority felt that 60 days—twice the period previously in force—would be good public relations, if nothing else, showing that the city was bending over backwards to be fair to the landlords, Commissioner Walter S. Pytko of licenses and inspection, on the other hand, felt the extra time would only mean delay in getting the job done. When the area was reinspected 60

continued on p. 73



Mr. Manning writes:

"I would like to take this opportunity to let you know how pleased I am with the operation of my R & M Attic Fan. You'll recall, I was prepared at one time to invest in a room unit cooler. However, during the extreme heat of last summer, your equipment was subjected to a rather rigid test, and I now find the fan operation alone produces a very satisfactory cooling effect. In view of the low initial cost and low cost of operation, I'd call this a 'gilt-edged' investment!"

IMPRESS YOUR PROSPECTS with cool sleeping, cool living, for as little as \$145.00 list—including automatic ceiling shutter! Your prospects may not have Mr. Manning's technical background, but they certainly share his desire for cooling every room in the house for so little money! Fan requires only 18" attic clearance; fits narrow hallways. 5,000 to 16,000 CFM. Available with or without automatic ceiling shutter. Fan guaranteed 5 years; motor and shutter, 1 year. Write for full details about this built-in sales talk!

EASY TO INSTALL-1-2-3!



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Ready-made attic louvers can be installed quickly by one man. Sizes for each of various fan sizes.





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Fan Division HH-26, 387 S. Front St., Memphis 2, Tenn.
Please send your booklet, "R & M Comfort Cooling and Ventilating," A.I.A. File No. 30-D-1.

Name_____Address ___

Zone____State

continued from p. 68

building in water shortage areas?

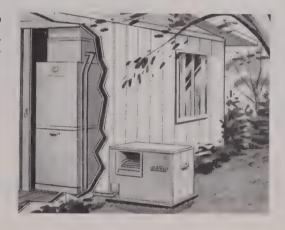


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ROTTEN PLUMBING is one of the worst sorespots in slum tenements. Here License Commissioner Walter Pytko — hat in hand examines some in ancient structures.

days later, Pytko's fears proved well-founded. Of 210 tenements without licenses, only 11 now had them; only 16 of 410 units with inadequate water supply had been brought up to standard; only a handful of the approximately 900 required basins or bathtubs had been supplied; and only 26 of 264 outdoor toilets had been removed.

Later in the year the situation began to improve. Magistrate Louis Vignola levied fines and costs totaling \$1,372 against the first 13 owners brought up for prosecution. More important, the city's pattern of action began to emerge. It became apparent that active prosecution was going to prolong getting results. So now, before an owner is hailed into court, an inspector makes a lastminute check. Since compliance, not convictions, is the objective, owners making satisfactory progress are not prosecuted. (This saves the city's law department time and money, but absorbs the time and money of the department of licenses and inspections.) Meantime, the inspectors report that it is getting harder and harder to find airtight cases for prosecution. "There's a lot of work being done down there," said one.

Box score at year's end:

Dox score at year 5 cma.	
Number of buildings in test area	1,190
Number in violation on first inspection	700
Number without violations	205
Buildings brought into compliance	161
Number vacated rather than comply	35
Scheduled for compliance by owners	251
Owners prosecuted once	100
Owners prosecuted twice	2
Properties with work in progress	26

Note: The first three figures above are somewhat at variance with the ten-month figures mentioned earlier because 1) a section of 285 properties in the test area has been earmarked for demolition to make way for the Fitzwater public housing project and 2) the ten-month checkup included some commercial buildings.

Big families add to relocation problems

The relocation problem growing out of Philadelphia's code enforcement is surprising all but the most pessimistic city officials.

For the first ten months of 1955, with the enforcement program just getting underway, the city paid \$10,000 for this work. This year, expecting to shift 3,000 families it is asking for a budget of \$32,000.

continued on p. 76



Learn the *money-saving method* for better shower construction

The cross section sample being shown in the photograph above clearly and simply demonstrates why the FIAT PreCast method of shower floor construction is the answer to an age old building design problem. It takes but a few minutes to see how this one-piece floor has many, many advantages over old fashioned, built-on-the-job shower floor construction. It is immediately evident that this solid, monolithic unit does away forever with any problems of leakage. The cut-away view shows how the integral flange forms a watertight seal between the floor and shower wall material (whether tile, plaster, wallboard or structural glass). You can examine how the drain is cast permanently into the floor material and how the inclined floor and raised shoulders deflect water downwards toward the drain. You will appreciate the substantial savings of on-the-job labor and understand why the low installed cost of a PreCast FIAT Floor makes all other shower floor methods obsolete.



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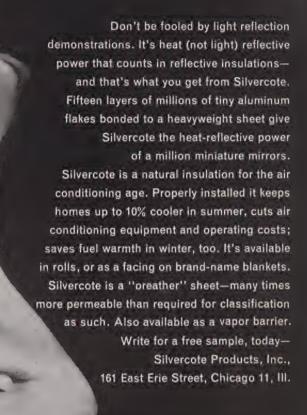
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Type of Business.



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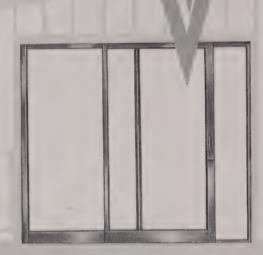
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IEWS

continued from p. 73

How effective is the program? Joseph Turchi, assistant to Housing Co-ordinator William Rafsky, says that 31 of the 158 relocation families in the pilot project (as of last Nov. 1) moved of their own accord. They may have moved into other overcrowded quarters, he admits, and thus may turn up on inspectors' reports again. But at least they moved. Of the remaining 127, five had been placed in public housing, five certified for public housing and another 43 declared eligible, but not yet certified. Thirty-three of the latter may be a long time getting in because they need threebedroom apartments or larger and these are scarce. (Only 45% of Philadelphia's 4,509 units built since 1950 are three-bedroomers or larger and they have the lowest rate of turnover-20% compared to 80% for the one- and two-bedroom units.)

Executive Director Walter E. Alessandroni of the housing authority feels family size is one of his biggest problems. "In 1950,"

SOME LANDLORDS GOT EARLY START TO GET EASIER RULES

Sometimes it pays a landlord to start renovation work before a housing code goes into effect.

Abe Levin & Sons, owners of more than 100 properties containing some 350 units, began installing baths and hot water in 1954. Howard Levin estimates they have installed 100 baths and hot water systems where none existed before. And close to 15 single-family dwellings which did not meet code specifications on heating do now.

The Levins jumped the gun for one reason: if the bathroom was installed prior to the effective date of the code, only two pieces were required. If it was installed afterwards, three were necessary.

he says, "our anlysis showed that what we planned in the way of big family units would be adequate, but it hasn't worked out that way. Since 1950, families have gotten bigger and our statistics went out the window. The same thing is true of new construction by private builders. The building industry is out of phase with the pattern of families . . ."

Other problems:

▶ A shortage of sites for new public housing projects, to a large degree brought on by the fact that there are many Negro families in the city's projects. But available sites exist for the most part in predominantly white areas.

The fact that many of the private, low-income rentals in the city (the Property Owners Assn. of Philadelphia has long claimed that there are 10,000 of these) fail to meet the code requirements and are therefore not legally eligible as shelter for displacees. Rafsky has working agreements with various Philadelphia realty boards whereby the city keeps the boards informed of what it needs and the boards keep the city posted on what is available. But two obstaclesrace and big families-have left the private rental market relatively useless in meeting the relocation problem. It has handled only six relocations from Hawthorne and 12 from other programs since June.

NEWS continued on p. 81

Pulse of the market:

Will a "components industry" grow up to build and sell parts of, but not whole, homes?

Anderson Woodworking Co. of Louisville, Ky. put itself into the components business last month under circumstances which suggest it may mark the start of a trend.

Anderson formed a wholly-owned subsidiary, Custom-Craft Homes Inc. to produce house panels for sale to lumber dealers. President Frank Anderson called it "the next step beyond the LuReCo panel," which was developed by the Natl. Retail Lumber Dealers Assn. in 1954 to simplify field erection costs by packaging wall, window and door panels, gable ends.

Anderson said his new setup results from pressure by lumber dealers who need something to compete with mass builders and big prefabbers who have been stealing more and more of local lumber dealers' markets. Custom-Craft will market 12' panels, roof trusses and gable ends to lumbermen within one-day trucking distance of Louisville. It will sell either the basic package or a full package including roofing and sheathing.

Three years ago (Oct., '52 issue), House & Home's Round Table on the "Too Cheap House" told the prefab industry they could tap a second market if they would sell parts of houses to people who wanted to buy only parts and sell whole houses to those who wanted to buy whole houses. Prefabbers have generally ignored the advice; their business has been soaring, anyway. With lumbermen getting into the act, the outlook is for sharper competition.

A 300-house subdivision in Spokane, Wash. is being built for businessmen who travel by private plane

Developer Loren Lemen is angling a 3.200' runway diagonally across the tract. He plans to keep household pets off with a high wire-mesh fence. Lemen calls it the nation's largest airport-residential development. The homes are priced from \$12,000 to \$50,000. The 150-acre project will also have playgrounds with pools, ball parks, tennis courts. Lemen, an air service operator for 11 years, will rent planes to residents who do not own them.

The swimming pool bonanza will get bigger

The industry is already experiencing the biggest boom in its history. Some 20,000 pools were built last year—one for every 65th new housing unit. This year, the industry looks for 30,000 new pools worth \$325 million, according to Swimming Pool Age.

About half the nation's 56,000 pools are on the west coast. The vast majority are owned by private home owners. But builders are putting more and more pools into new subdivisions and even into new apartment projects. Amid softening markets, they figure a pool is a strong sales feature. For instance, Builder W. Baum and Architect J. Lloyd Conrich threw weather maps to the winds recently and designed an outdoor swimming pool for an apartment building in San Francisco. It will be heated. The idea, said Conrich, is to bring suburban living to people who do not want to leave the city. Bollinger-Martin, Inc. in Louisville will spend \$250,000 on club, pool and allied facilities on a 20-acre plot of land on the periphery of a new subdivision. It will be the third swimming club in Louisville.



Who put the bomb in Harry Adnee's house?

Outraged members of the Cincinnati Home Builders Assn. offer a \$6,000 reward to anybody who can tell them who caused the double explosion that reduced to rubble this \$19,500 house just completed by Builder Harry Adnee of Triton Co.

Adnee's nonunion workmen offered to clean up the mess on their own time for free. But Adnee thanked them and paid usual wages. Last June, Adnee's firm got a permanent injunction against AFL carpenters who had picketed ten Triton homes in a vain effort to organize the workers. The explosion, apparently dynamite, occurred at 1 a.m. Nov. 8. A month and a half later, authorities said they still had no clues.



Big subdivider plays Santa Claus in Texas

Taking a chance on a free house, Houstonians line up to deposit entry blanks at a \$15,000 giveaway home put up by developers of Sharpstown for Christmas. Such promotions have pushed growth of the project, which Frank Sharp says will reach 25,000 houses. Nine months after ground was broken, it had 875 homes completed or under construction and a population of 1,627.

Eichler plans three more experimental steel houses

Builder Joseph Eichler will put up another experimental steel house in three northern California subdivisions this spring. The new house—some 1,500 sq. ft. with three bedrooms, two baths and an all-purpose room, is being designed by Architect Quincy Jones. Eichler expects it will act as a crowd-puller at tracts in widely-scattered locations around San Francisco Bay. It will also give him more experience in steel-frame construction, and serve as a testing ground for advanced kitchen equipment, lighting, built-in color TV and hi-fi.

Eichler's first experimental steel house (Dec. issue, p. 138), designed by Architect Raphael Soriano, has been viewed by thousands of home shoppers in the San Francisco area.

Biggest project in Marin County among subdivision plans for '56

Although the biggest builders in the nation were getting smaller (see pp. 156-61), there was no indication that the runners-up were cutting down on big plans. Items;

▶ Builder John P. Stegge of Vallejo, Calif, was at work on what promised to be the largest housing project in Marin County—a 6,000-home development sloping down to 5 mi. of tidal flats along San Francisco and San Pablo Bays east of San Rafael. (An order signed for electric appliances for the homes is potentially the largest ever set up by Westinghouse's electric appliance division for one project.)

Don C. Maxon of Maxon Construction Co. in Chicago purchased an 850-acre farm from Curtiss Candy Co., planned 740 homes on rolling, wooded land.

A Canadian syndicate bought a 1,700-acre tract north of St. Petersburg, Fla., would probably leave most of the home building to local continued on p. 84



LAPPED SIDING

8' planks, varying widths, %", or ¼" thick. FHA approved.



GROOVED SIDING

4' x 8' panels, %6" siding over lumber meets FHA specifications.



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HARBORITE...MULTI-USE PANEL...NOW REDUCED 20%* COMPETITIVE WITH FINEST MARINE TYPE FIR PLYWOODS

For fifteen years, Harborite, the lumber industry's first and finest overlaid fir plywood, has gone almost exclusively to the U.S. Government. Now, new production techniques make it possible to offer Harborite in unlimited quantities to the building industry. This super-strong, lightweight, structural panel with weather-proof, split-proof, check-proof qualities has a multitude of uses for better construction. Harborite's hard, smooth, grainless face is the perfect paint-holding surface; grain-raise problems are minimized.

*warehouse prices...vary slightly in each market.

Build it Better! Harborite is stronger than steel... super resistant to wear... and impervious to weather and moisture. Harborite will last a lifetime... will continue to look fresh and new.

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- 4. Harbor-developed waterproof glue makes a permanent weld.
- 5. Core panels are rehumidified to minimize warping and grain-raise.
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BUILDERS AT WORK

continued from p. 81 contractors. Said A. Parker Bryant, partner in the brokerage firm representing the syndicate: "We would be glad to welcome a new railroad station out there."

President Roy M. Schoenbrod of Citation Builders-affiliate of Hyland Builders Corp. in Chicago-will put up 1,000 Techbuilt homes (Architect Carl Koch's product) in half a dozen Chicago suburbs.

Ray Simley & Co. is at work on a 350-home subdivision in Jackson County outside Kansas City, with prices between \$13,950 and \$15,000.

▶ Emil Gould heads up a group which has purchased one of the last undeveloped sections of Coral Gables in Dade County, Fla. and divided it into 250 lots, plus space for multiple-family buildings and a shopping center. The developers will dredge 400,000 yards of fill to create four new waterways.

How far can builders stretch the Long Island market?

Long Island home builders seem about to give the rest of the country a major test of how far from a central city you can stretch a commuter-based volume house market.

Pincer-shaped Long Island, which in postwar years has become New York City's big new middle-income bedroom, is giving builders plenty of problems. Close-in land is scarce, costly (\$11-\$15,000 per undeveloped acre in Nassau County) and usually restricted (high minimum frontage, compulsory contributions for parks, school sites). Industry is not moving in as fast as builders would like, and credit restrictions have put a psychological damper on sales.

Says Builder Reginald T. Watson (543) houses last year): "Until more light industry moves to the island, the big volume market we had is a thing of the past. There just isn't enough land close to Manhattan, Brooklyn and Queens for the industrial worker." Watson says industrial commuters cannot afford to commute beyond Smithtown and Oakdale in Suffolk continued on p. 93



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County. Lawrence Elkind, who built 900 houses in '55, has moved part of his operation to New Jersey because "we have to depend more and more on Long Island workers for our market and there just aren't enough of them."

A few other builders have pulled up stakes. But President Emil Keen of the Long Island Home Builders' Institute notes the big trend: "For every one leaving Long Island, there are ten or 12 moving eastward to Suffolk County." Suffolk begins at a distance from Manhattan (32 mi., 75 min. by train) that would probably deter commuter-residents of any other US metropolis. But Long Island builders are banking on an ambitious road-building program (already underway) to improve commutation and encourage industry to move to outer Long Island's cheap, easy-to-build-on sites. Predicts David Gouze of Kern Realty Co.: "I expect heavy development to go out as far as Patchogue once the expressways are built."

Makers of wood kitchen cabinets organize a new trade institute

Twenty-one wood kitchen cabinet manufacturers formed a new trade group, the Natl. Institute of Wood Kitchen Cabinets, named Fred Montiegel as manager and adopted the slogan: "Wood for enduring beauty." Among the charter members: Mutschler, Carr Adams & Collier, Mengel, Brammer, Curtis, Coppes-Napanee.

Thyer brings out a prefab model in the \$20,000 price class

Thyer Manufacturing Co. of Toledo, O. moves into a higher price bracket with its newest prefab house. The three-bedroom, two-bath "Starlighter" model will sell for about \$20,000. Features: interior redwood paneling, multipurpose room in addition to a 17' x 19' living room, fireplace as an optional extra.



THYER'S NEW STARLIGHTER MODEL





ZACHARY TAYLOR FAMILY HOME SERVES AS LANDMARK IN LOUISVILLE SUBDIVISION

Old mansions raise dollar value of land in new subdivisions

An old mansion may be a white elephant downtown, but more and more subdividers are finding it can be a profit-builder in the suburbs.

The new twist on the "George Washington Slept Here" theme is that not only does the old landmark itself command a prestige price, but so does the entire development around it. Some recent samples:

In Louisville, Wakefield-McMakin Realty Co., which has been saving old mansions, ancient farm houses and suburban estates since 1919, paid \$200,000 for 35 acres surrounding President Zachary Taylor's brick house (built in 1792, modernized in the 1930's). It was the highest price ever paid in Louisville for residential land. The firm has not yet set a price on the mansion, but it will be kept as the central feature of the subdivision. The rest of the tract will yield about 70 lots.

Wakefield-McMakin previously capitalized on another house formerly in the Taylor family (see photo), which they remodeled and sold for \$35,000. New homes surrounding it—in one of Louisville's high-prestige areas—are priced at around \$30,000.

The landmark on the property can also be occupied by the developer. This usually means a sacrifice of lots for sale—if the developer keeps three or four acres for himself, for example—but this loss is at least balanced by the increased value of the lots nearest the estate.

When Joshua B. Adams, also of Louisville, went to work finishing up the Rock Creek Gardens subdivision (his father, Martin L. Adams, bought the 44 acres 15 years ago) he at first thought that an old two-story brick farm house in the last section would have to be torn down. But land values had jumped by this time and Adams figured he had better make the most of everything on the property, including the farm house. He completely rebuilt it, doubled the size of the main brick structure, added a service wing in back and a portico in front and painted the house an off-white with a suggestion of pink. He also laid down a divided lane roadway from the front of the house to nearby Rock Creek Lane to "keep from feeling shut in." The rest of the subdivision homes are ranged round a semi-circular road running on three sides of Adams' 2.85 acres. The important thing is that the lots along this road, facing the big

house, have brought the highest prices of any in this part of the subdivision. (Prices range from \$4,500 to \$7,250 for an average 100'140' x 140' lot.) Adams feels that in spite of losing two lots for the road and spending \$2,500 for its construction, the project was no loss. And it certainly increased speed of sales. "That last group of lots (41 of them) sold before we could turn around," he commented,

Other signs of the times:

▶ In suburban Westchester County, north of New York City, Builder Mannie Shapiro is building 300 homes to sell for \$30,900 to \$41,900 on wooded ground that includes a huge mansion built in 1921 by the late Robert Law. The oil magnate's property once contained a private polo field and a 12-hole golf course. The builders expect to keep the small palace for awhile as "a striking symbol of the luxury estate atmosphere" of their development. Meantime, they sold 55 houses the first three weeks they were taking orders.

Long Island is also a good place to latch on to a manor house. Builder Nicholas Piccioné will build 140 residences (\$25,000 to \$30,000) on a 175-acre estate in Huntington. A 15-acre section of the property, which holds the cutstone manor house, swimming pool, gardens and 1,000 pine trees, is being held out from the development by the builder and offered for sale through Previews, Inc.

If the landmark's main value is historical, outside forces sometimes come into play to keep it as a shrine. When subdivision plans were announced for acreage surrounding a house built in the early 17th Century by Adam Thoroughgood in Princess Anne County, Va., a citizens committee was formed in Norfolk to restore and preserve the building. James N. Collier, who owns the property, agreed to sell the house for \$25,000. The land on each side will be subdivided into one-acre lots and building restrictions will govern the kind of houses that can be built.

How many contemporary homes can a booming market take?

"There was a tremendous shift to contemporary design around Los Angeles last summer. But too many builders hit the market all at once with contemporary houses and for some of the poorer designs the market slowed up."

So says Sales Manager Frank Hart of Walker continued on p. 96

Turn window beauty into home sales



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pigments and vehicles, are

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workable,

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they're used by volume

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BUILDERS AT WORK

continued from p. 93

& Lee, one of southern California's largest new house realty firms. Walker and Lee were asked to take over the sales of several tracts, got them moving again. Hart believes that 35-40% of the market is not too much for contemporary but if more than that proportion is put on the market, sales slow down.

More and more southern California builders are turning to professional sales firms, says Hart, Walker and Lee sold \$72 million worth of houses in the first 10 months of 1955 compared with \$34 million in the same period in 1954.

Jalonack, ex-Levitt technical chief, plans 3,000-unit project in N.Y.

irwin Jalonack, former technical director for Builder William J. Levitt, plans a 4,000-home project 90 miles north of New York across the Hudson River.

Jalonack is not counting on his buyers commuting to the city. He is counting on the fact that International Business Machines Corp. is at work on a new plant in Kingston, N. Y. and that a lot of their engineers will need homes.

To fit this market, about 1,500 of Jalonack's houses will sell in the \$20,000-27,000 range. Others will start at \$12,000. He wants to start at least 500 early this spring. Architect Herman York has designed the plans, which Jalonack says make the kitchen the folael point of the house.

Jalonack has formed a corporation called Masterplanned, Inc. to handle financing and sales-promotion for the project. He has not revealed who his associates are except for Robert Trent Jones, the famed golf course architect, who is at work now on a recreation center and golf course for IBM in Kingston.

Shreveport builder rents idle land for house trailer sites

Builder Frank Zuzak of Shreveport has found a very profitable sideline to his land development and building business: he owns a trailer park and rents sites.

Zuzak thinks other builders can thus use land they are holding for later development. From studying the compact design of expensive house trailers, he wonders if house designers couldn't learn much about better use of space from the trailer designers. Says Zuzak: "Trailers have a lot more built-ins than houses do and the kitchens and bathrooms are also ingeniously designed. When you buy a trailer, you really get a finished package. Builders should offer the same compactness.'

Sampson-Miller hires research director to study new homes

Sampson-Miller Associated Companies, one of the biggest builders in Western Pennsylvania, believe they have grown so big they "can no longer afford not to have a research director." Says Stan Edge, marketing and advertising vice president: "We are committed so far ahead that we have to make sure we're right." Their new man: Architect John Cavitt, whose job will be to research not only what goes into a house but paving, planting and exterior painting as well, Sampson-Miller, now building Garden City in Pittsburgh (Jan. issue), also hired an ex-FHA regional director-Oakley Heselburth -to spend full time looking for land.,





Using L-M Perma-Line bituminized fibre pipe, a 3-man crew with a shovel operator completes 15 to 18 house-to-street sewer installations per 8-hour day at Levittown, Pa. The resulting time and labor saving, along with the use of other modern materials and methods, is reflected in values such as that shown in the attractive 2400square-foot de luxe Country Clubber at \$17,500, shown below.

Perma-Line Sewer Pipe saves Levitt installation time and handling costs

In Levittown, Pa., Levitt & Sons, Inc., has used 624,000 feet of L-M Perma-Line pipe for house-to-sewer installations during the past two years. Perma-Line is now used exclusively. These installations consist of 3" x 8' Perma-Line bituminized fibre pipe, laid in a trench dropping from 2½ feet at the house to 7 to 9 feet maximum at the property line. Lines vary from 52 to 210 feet, with an average of about 60 feet.

"Ease of handling and installation" are the primary reasons for using Perma-Line pipe, according to Levitt & Sons' superintendent of sewer construction. A three-man crew with a shovel operator makes 15 to 18 complete house installations a day. The result is "a considerable time and labor saving."

Levittown, at the big bend of the Delaware River just above Philadelphia, is perhaps the most significant development in the postwar building era. Now representing some 12,000 homes with a population of 46,000, Levittown eventually will include 17,000 houses with about 70,000 residents. Use of Perma-Line pipe and other modern materials and methods makes possible the excellent values Levitt & Sons, Inc., offers the public in Levitt homes.



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EVENTS

Mason Contractors Assn. of America, convention and show, Feb. 5-8, Kentucky Hotel, Louisville, Kv.

NERSICA, 14th annual convention and exposition, Feb. 11-13, Ambassador and Ritz-Carlton Hotels, Atlantic City, N. J.

National Adequate Wiring Conference, Feb. 23-24, LaSalle Hotel, Chicago.

Mortgage Bankers Assn., Midwestern mortgage conference, Feb. 23-24, Conrad Hilton Hotel, Chicago.

American Society for Testing Materials, committee week, Feb 27-Mar. 2, Hotel Statler, Buffalo, N. Y.

American Bankers Assn., annual savings and mortgage conference, Mar. 5-7, Statler Hotel, New York City.

National Electrical Manufacturers Assn., midwinter meeting, Mar. 12-16, Edgewater Beach Hotel, Chicago.

National Home Show, sponsored by the Toronto Metropolitan Home Builders Assn., Mar. 30-Apr. 7, Coliseum, Exhibition Park, Toronto, Canada.

Mortgage Bankers Assn., Southeastern mortgage clinic, Apr. 5-6, Hotel John Marshall Richmond, Va.

Builders Assn. of Metropolitan Detroit, Builders Show, Apr. 7-15, Michigan State Fairgrounds.

National Housing Conference, annual meeting, Apr. 9-10, Statler Hotel, Washington, D. C.

Mortgage Bankers Assn., Southern mortgage conference, Apr. 9-10, Dinkler-Plaza Hotel, Atlanta.

American Institute of Architects, regional conferences: South Atlantic District, Apr. 12-14, Durham, N. C.; Middle Atlantic District, Apr. 26-28, Wilmington, Del.

Home Builders Assn. of Greater Boston, annual Home Progress Exposition, Apr. 14-21.

Gas Appliance Manufacturers Assn., annual meeting, Apr. 19-21, The Greenbrier, White Sulphur Springs, W. Va.

Associated Home Builders of the Greater Eastbay, California International Home Show, Apr. 21-29, Oakland Exposition Bldg.

Mortgage Bankers Assn., Eastern mortgage conference, Apr. 30-May 1, Commodore Hotel, New York City.

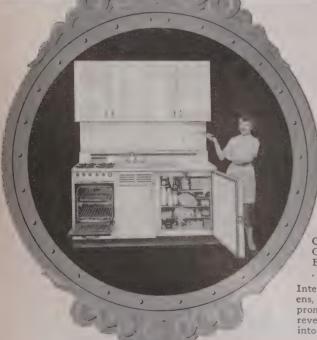
National Savings & Loan League, annual convention cruise from New York to Bermuda.

May 12-17, S.S. Queen of Bermuda.

International Home Building Exposition, "Showcase for Better Living," May 12-20, New York Coliseum.

National Retail Lumber Dealers Assn., spring board of directors meeting, May 13-18, Shoreham Hotel, Washington, D. C.

American institute of Architects, annual convention, May 15-18, Hotel Biltmore, Los Angeles.



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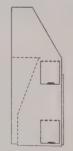
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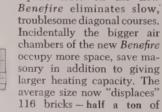


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LETTERS

DECEMBER ISSUE

Sirs

... An excellent presentation of the prefabrication picture, House & Home keeps getting better and better . . . it is nothing less than the "bible of the industry."

H. E. NORTH JR.

President

Arcadia Metal Products

Fullerton, Calif.

LIGHT AND LEADING

Sirs

This is the first real insight and appreciation I have had of the prefabricated home industry. Your publication has rendered a great service to a very important business.

J. P. CLEARY

A. Aladdin Investment Co.

Denver

DIRECTORY CORRECTED

Sire

... An outstanding job! It's even better than last year. One minor point: Horace N. Durston is president of American Houses, not Federal Homes Corp. as listed in the directory on page 160.

KENNETH H. ZABRISKIE Treasurer American Houses. Inc. New York, N. Y.

Sirs:

Not to minimize the power of House & Home, we've been getting telegrams and letters from all over the place with our president's name listed incorrectly (as it was in your December directory). His name is Ira H. Gordon.

S. L. ROTHMAN Advertising manager Swift Homes, Inc. Elizabeth, Pa.

A REALTOR SPEAKS

Sirs:

Your coverage of realtors' convention (Dec. News) was highly constructive.

Realtors are spokesmen for a housing inventory that totals 52 million homes. Too many of these homes have been allowed to fall into decay and disuse. Reconditioning of this inventory—with attendant opportunities for profit—is dependent upon the realtor's "know-how" and his leadership.

At their 48th convention realtors made decisions to accept the responsibilities which have come to them. They recognized that the strength of their great national organization and the several state associations is dependent upon the strength of the local boards of realtors everywhere.

Eugene P. Conser Executive vice president Nat'l Assn. Real Estate Boards Chicago

continued on p. 104



Never before has it been possible to install a real wood-burning fireplace so easily and economically. Costly fireplace and chimney masonry becomes a thing of the past. No reinforcing of floors or walls is necessary. Complete in itself, it does not need to be enclosed in a mantel or other expensive finishing materials. Can be installed by semi-skilled workmen in 4 to 6 man-

The Uni-bilt Fireplace provides a high prestige feature in the homes you build. Blends with any style architecture . . . can be painted to harmonize with any color scheme. Adds value the buyer can actually see at a price he can afford.

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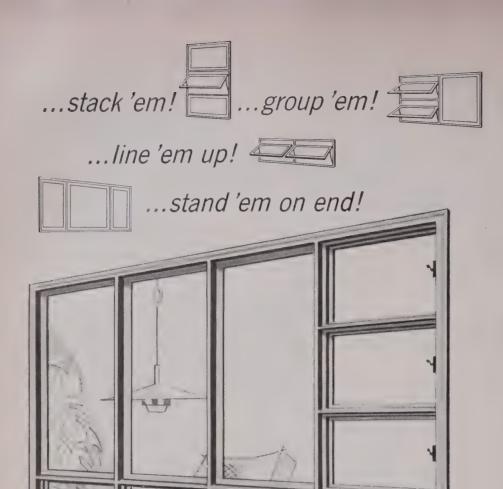
Send complete information on the new Uni-bilt Fireplace.

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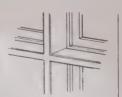
Now you can give your homes new window variety, value and beauty! Crestline Awning units form stacks, ribbons and groups in many combinations of fixed and ventilating sash. Use them in any type home and room! Units install easily, adapt to any wall, and are glazed with Crestopane insulating glass. Full weatherstripping, aluminum screens, and roto-operators are applied to every opening unit. Durable, smooth operating hardware is exclusively designed by Crestline! Build with Crestline—for greater loan values and at prices that mean more profits for you!



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Crestopane insulating glass is factory-applied in all units. (Single glazing optional.)



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LETTERS

TRADE-IN ROUND TABLE

Sirs

After participating in the Round Table discussion on Trade-ins (Nov. issue), I wondered how you could possibly boil the conference down into an orderly article that would make sense.

After reading your 10-page report, I commend you for the amazing job in unraveling a complex subject and setting it forth in such clear, concise and interesting fashion.

We are still having difficulty with both "interim" and "take-out" financing. I think some reprints of the trade-in article could do a lot of good if I sent them to all mortgage financing outlets in our area.

Mortgage men, bankers, builders and realtors here all feel you are doing by far the best job in the entire industry.

JOHN G. CLARKE Realtor-builder Portland, Ore.

The reprints have been sent-ED.

STANDARDIZATION-I

Sirs:

The series of Round Tables to propose standard dimensions for the builder's house have given a real lift to the Modular Measure program. This is reflected by an increase in the number of materials producers volunteering to cooperate with the modular dimensioning effort

One specific new project is the current study of residential window sizes being conducted cooperatively by NAHB, Aluminum Window Mfrs. Assn. and the National Woodwork Mfrs. Assn. Its purpose is to reduce the installed cost of the windows in builders' houses by a) decreasing the number of window sizes stocked by manufacturers and b) seeing to it that these sizes are modular for utmost economy of labor and materials.

The trend toward universal use of modular measure gained considerable momentum during 1955. Those of us most closely identified with this effort owe House & Home a resounding vote of thanks.

WILLIAM DEMAREST Modular Coordinator, AIA Washington, D. C.

STANDARDIZATION-II

Sirs

You are entitled to take great pride in what House & Home has accomplished in advancing the standardization of components for builders houses.

G. F. Hussey, Jr.

Managing Director

American Standards Assn.

New York City

House & Home

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VOLUME IX, NUMBER 2



STORY OF THE MONTH

110 Los Angeles: Sales stay up when luxury is built in

DESIGN

- 136 What it takes to make a split level house look better
- 162 How to redevelop an old estate

ROUND TABLE REPORT

126 Forty ways to save on materials handling

NEW HOUSES

- Wilmington, Del: Buyers swing to contemporary 144
- 15 Biggest US builders and what they build 152
- How a small builder tripled his sales 158

LAND PLANNING

Let a market analyst look before you leap 134

PRODUCTS & PRACTICE

- Truss framing now saves you twice as much 122
- New Lu-Re-Co wall panel system for interiors 12.1
- Four more ways to build better for less 150
- Built-in room air conditioning units 168
- More product news 176

NEWS

- Is the mortgage market turning the corner? 13
- Gypsum, cement, glass: how long will the shortages last? 39
- Code enforcement spoils a market for slum housing 61
- Index of News 37

DEPARTMENTS

- 98 Events
- Letters 100
- Technical News 170
- 228 Technical Publications



COVER

George Buccola's L.A. kitchen by Smith & Williams, photo by Julius Shulman



In competitive Los Angeles

SALES STAY UP WHEN LUXURY IS BUILT IN

NOWHERE this winter is homebuilding more competitive than in big, sprawling Los Angeles.

L. A. is competitive because builders are hustling to unload several thousand houses left over unsold from 1955's short-stopped boom. Prospective buyers can pick and choose, sorting out what they like and will buy from what they don't like and won't buy.

Result: they are demanding—and getting—more luxury features at \$13,000 to \$20,000 than you could find a short time ago in houses selling for \$30,000 or more.

The paradox of no takers for houses offered at nothing down while others sell briskly despite \$1,000 to \$3,000 down payments has confronted L. A. builders only since last fall (local VA applications fell 60% from October to November). Earlier in the year sales were zooming merrily.

Too many looked alike

Much of what went sour in L. A. last fall was due to putting up the wrong kind of house. But there were also too many tracts all showing about the same kind of house at about the same price: \$14,000.

In most cases these builders had taken their market for granted, counted on easy terms to do the selling for them. Not

only did terms fail but so did searchlights, circus tents, giant road signs and other old standbys.

Skyrocketing land cost was another explanation for lagging sales. Some builders simply tacked the increase onto their selling price and went right on offering the same old model with the startling result: no sale.

In today's prosperous economy many L. A. home-buyers seem to follow an unwritten rule: the more the land costs, the better the house must be (even though this means paying more).

Almost invariably today's fast seller has "something different" to set it apart in the buyer's mind. Experts agree the best help is a choice location. But the site need not be too big; "only buyers inexperienced with L. A. yard maintenance go for larger lots."

Best seller exteriors follow no rule

A year ago even poor copies of second-rate modern were the rage. Today contemporary design must be good in order to sell, and when it is, it's often a best seller (see pages 112-113, 120-121).

The nondescript, all-stucco house—long a staple—was another casualty of the buyers' market. Current successes are often its antithesis and combine three exterior finishes: masonry block, stucco and wood.

But plain Janes no longer sell now that buyers expect today's new features



L. A. style of the moment is the story-book house (see page 115). Rich in ornament and romantic associations, this design recalls the cottage-style revivals popular in expensive Eastern suburbs during the middle 1920's.

Interiors are modern

Buyers all agree about the inside: more luxury. This means larger rooms, better detail and finish, more features (called "demand extras" even though included in the price).

One observer reports: "I believe most L. A. builders are approaching contemporary design via the inside of their houses. The insides are open plan, open kitchens, big windows, rear living, cleaner and simpler walls and doors." (See pages 114, 116-120.)

Kitchens boast color and built-ins

Architects Palmer & Krisel—designers of many of L. A.'s finest builder houses list "a fully equipped kitchen" near the top of their best sales features. George Siller, who handles advertising for 40 builders, claims: "Built-in appliances are the biggest thing that ever hit the housing market." For photographs and data on what sells L. A. kitchens, see page 119.

Two baths are a must

L. A. builders are promoting a new concept of bathroom luxury. Baths are bigger, have more equipment—and there are more of them. One builder put three in a \$15,000 model. Master bath generally has shower, second bath, a tub. If there's an extra half bath, it is "where the kids can use it coming in from outside."

An L. A. visitor comments: "Bathrooms are better lighted than in most other parts of the country. They have bright colors and attractive wallpaper." (See page 118.)

Master bedroom is important

Smart L. A. builders do something special for the master bedroom. Frequently it is at opposite end of house from childrens' rooms, has suite-like effect with closets just inside entrance so hall lends it extra space. Built-in storage units are as popular as private bath. (See page 114.)

Models feature living room

The living room gets extra attention in L. A. model houses, is profesionally decorated and furnished to convey an impression of the good life. For data and photographs on role of fireplace and other luxury features, see page 116.

Don't cheat on family room

Today's best sellers show strong trend to the family room. Most favored location: off kitchen (with floor that matches kitchen's). But it must be a real room: "don't call a third bedroom or den a family room and think you'll get away with it." (Photographs and sales features, page 117.)

Garages and patios sell

Almost every best seller in L. A. today has a two-car garage, some oversized. Failure of one large project is attributed partly to its one-car, detached garages.

Paved patios are a usual feature, but the terrace should always be on same level as the interior, not one step down (see page 112-113).

"The house that has everything"

If there is a single secret for succes in today's L. A. market it probably comes close to this: "Put a team of profesionals to work—architect, color stylist, landscape specialist, decorator, realtor. And give the house just as many luxury features as you can crowd in."





Model house is one of three built around a landscaped court, each planned and polished like a Hollywood movie set

Here's how one builder merchandises luxury for \$15,750



Ross Cortese's Frematic Homes are sold far ahead of construction in his 380-house tract in Anaheim. While some other builders were saying, "Modern is dead," Cortese sold 140 of these houses in the first three months, 60% FHA with down payments of \$2,150. His sales are good because he has worked hard to make every part of his house an attractive feature. His big houses (up to 1,506 sq. ft.) are different from any others in his area. He has three and four bedroom models, as many as 28 variations. For the interiors, turn the page.





Street view shows palms, other trees and shrubs which were brought in to give an aura of distinction. Attractive privacy fences, big two-car garages are other sales assets. House designed by Jones & Urmston.

Entrance court of each model is different and suggests ways buyers can develop patios for easy maintenance. Front door has handsome opaque plastic panel.

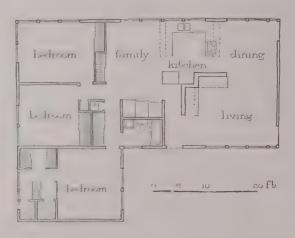




Photos by Julius Shulman



Master bedroom in Ross Cortese house is big, Its spaciousness emphasized by the use of king-size bed in the model house. Private bath and dressing area (at right in photo) is much admired feature. Other good sales items include: beam ceilings, interior masonry, hammered glass in gable ends and lavatory partition.



Open living area of 1,500 sq. ft. model is furnished handsomely. Glass doors in living and dining room lead to rear patio. Ceilings of living area are acoustically treated. Family room is centered for general use and bedrooms are well located for privacy.

Interior of \$15,750 model is loaded with sales features



U-shaped kitchen of the Frematic Home is a "Betty Furness" promotion and the pivot point for billboard merchandising. Color-matched appliances, all built-in, are: cooking units, refrigerator and washerdrier. Garbage disposer and exhaust fan are also included. Natural ash finishes, ample work surface and masonry add to kitchen's appeal.



California provincial architecture like this fulfills many buyers' dreams

But modern has no monopoly on luxury

... these "story-book" houses are big sellers, too

Among the best selling designs in Los Angeles today are houses like these four.

This type has been called provincial, story book—even Hansel & Gretel. Two typical examples, named "Cinderella" by their designer (see photos, right), sold so well that astute builders like Reese Myers (new president of L. A.'s Home Builders Institute) are said to be paying up to \$5.000 for plans.

With cottage style architecture, small leaded window panes, scalloped gable ends and other folksy characteristics, these models represent a complete swing of the design pendulum away from contemporary. Architects and sales experts around L. A. explain it as a reaction to the thousands of poorly designed modern houses thrown on the market during the past two years.

Said one architect: "There's more bad modern in Orange County than anywhere else in the country." Much of it was a bad copy of a bad original. Buyers turned against it and looked for something new and different.

The market shifts so fast in Southern California that builders are wondering what will happen if too many firms duplicate the Cinderella type. In a builders' meeting early this winter, Walter Keusder (past president of HBI) warned his colleagues: "If too many of you copy this kind of design it will be a dead duck in six months."

The popularity of these houses indicates there is no one kind of design that is "right" for any area, because buyers are individuals and want many different kinds of houses. Of the four best sellers among all the houses handled by Realtors Walker & Lee, two are contemporary, two are traditional.



Cinderella house, priced at \$13,600, has garage-door shutters, unusual roof



Another Cinderella features pseudo-Victorian gable end, leaded Windows



Aldon's version helped make firm one of nation's 15 top builders

FEBRUARY 1956



Masonry wall for fireplace with black metal hood dominates the room, adds to expensive look of this \$17,600 house. Flush joint between glass and masonry wall is a dramatic feature, is practical for temperate L.A.



Old brick around fireplaces is a best-selling feature. Variations include range built into kitchen extension of this free-standing chimney.

Luxury features sell

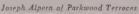
THE LIVING ROOM

Fireplaces are a sales necessity in houses over \$12,500, according to L.A.'s leading sales firm, Walker & Lee. These photos show that when fireplaces become important design features they also become sales features. Successful builders work as hard to make their living rooms attractive as they do their kitchens. They spend \$75 to \$125 for lighting fixtures, make walls handsome with masonry, wood paneling and wall paper, pay extra to employ professional decorators and color stylists.

Photos (above and below) Julius Shulman



Louvered folding doors, cork floors, and big brick fireplace wall give this living room in a "story book" house extra appeal for many buyers.





Wood paneling, open beam ceilings, light trough, tiled hallway and stone planter box are big attractions.



California provincial house has family room in character with exterior design

Luxury features sell THE FAMILY ROOM

Photos: Julius Shulman



Convertible bedroom is uncommon but well received feature. Fireplace and big masonry wall are keys to room's convertibility.



Family room is always found in L.A.'s current best sellers. Note concealed laundry, folding door, paneling.



Photos by Robert Cleveland of a Sun Gold house



Photo by Julius Shulman



Luxury features sell

THE BATHROOM



Over-size shower stall, lots of tile and color, better hardware give new elegance to this bath.

Photo by Joseph Alpern of Parkwood Terraces



Marble top counters and double basins are used in houses priced as low as \$15,500.



Big mirrors, storage space under basins, colorful wallpaper, better light fixtures are "best-sellers."

Sliding glass doors from master bath to private patin are a luxury touch of indoor-outdoor living.



Built-in dresser, drawers and closets off bath lend air of deluxe suite to design of master quarters.



Julius Shulman

Color splashed kitchen with its matched color appliances is one of most effective answers to competitive market

Luxury features sell THE KITCHEN

Photo: Julius Shulman; Architects Palmer and Krisel



Built-in-ovens, burner tops and free standing counters with easy to maintain surfaces are typical

Kitchens get a closer inspection from buyers than almost any other room in Los Angeles houses.

In today's buyers market builders hustle to keep up with every new kitchen feature that adds extra sales appeal. The real bonanza is the built-in oven.

Up to now few builders have been in the habit of including a stove in a house. But after the success of the built-in oven, practically no one leaves it out, even in a \$12.000 model.

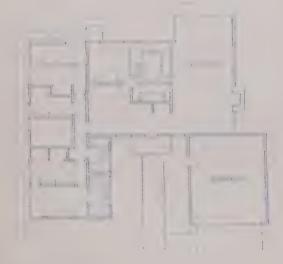
In one tract of 624 homes in Orange County, 400 houses had been sold when business hit last fall's slump. The builder reacted by putting built-in ovens in three models on an optional basis and immediately sold the remaining 224 houses. To top this, the buyers of the first 400 houses came back and paid extra to get the same equipment.

A breakfast bar in the kitchen is also a big sales feature, but its location is important. A spot between the kitchen and the family room is accepted, but not between kitchen and living room.

Robert C. Cleveland of Sun Gold



Barbecue in concrete block offers "something different."



Square plan balances bedrooms at one side with living room on the other. Family room is centrally located, opening to garden, kitchen, entry and hall.

Living room fireplace is set on raised quarry tile hearth and in a masonry wall which extends outside as part of the patio. Big window wall makes an already very large room seem even more spacious.





This \$18,500 model of Sherwood Forest home sold 16 in ten days

Los Angeles lesson:

At any price, in any style,



the try for perfection wins

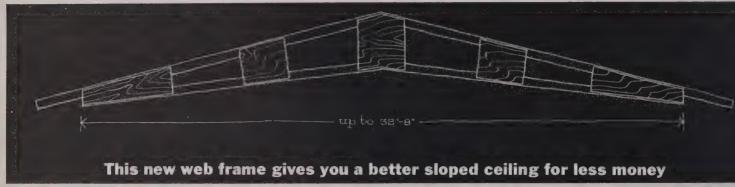
This fastest-selling Sherwood Forest model is a fine example of the contemporary design architects like Smith & Williams are doing for Southern California builders.

But the real point about this house is not its particular style. For more important is the fresh spirit that sets it off from tired copies of yesterday's best sellers. Even more noteworthy is the meticulous care Builder George Buccola gave to every phase of his project—attention reflected again and again in homebuyers' appreciative appraisals.

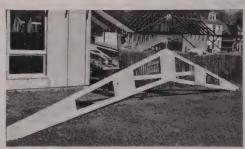


"This new geometry makes all other truss designs obsolete for spans up to 24'-8" and also for 32'-8"," says Jim Lendrum of the Small Homes Council. "It is not only cheaper and lighter [see table on opposite page] but stiffer and stronger too." Tested at Illinois and Purdue (see cut) it deflected only 3/4" under 100 psf roof load, 5 psf ceiling load. It is less economical than a W at 28' because it requires 2 x 6 chords.



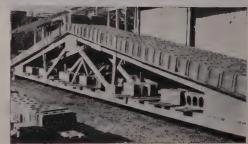


Now builders can have the sales appeal of a sloped ceiling at lower cost than plank and beam construction. They can also avoid the condensation and insulation problems common when the roof does double duty as the ceiling. These new web frames are economical up to 32'-8". "They line up perfectly when used with flat ceiling trusses." Pitch is fixed at 3-in-12 for upper chords, 1½-in-12 for lower.





New tests show the glue-nailed truss can be economical far above the 28' limit of the old truss. That makes it truer than ever that the cheapest way to make a house bigger is to make it wider, using the added depth for better storage or inside baths. These trusses can also be used (at some extra cost) to turn the ridge the short way of a house 40' long. Like kingpost, pitch can be 1/12, 2/12, 3/12 or 4/12./END



NOW YOU CAN SAVE TWICE AS MUCH BY SWITCHING TO TRUSS FRAMING!

Only a year ago the best truss you could use was a nailed truss that saved almost no lumber and stopped at a 28' maximum (because there was no room for all the nails needed for any wider span).

The first glue-nailed truss was announced by the Small Homes Council early in 1955 (H&H, March '55)—a W truss that required less labor and 35% less lumber. Maximum span was still 28'.

Now the Small Homes Council has pushed the advantage of glue-nailing much further. 1) It has developed a new kingpost truss that is much simpler to make and uses up to 50% less lumber than the old nailed truss. 2) It has developed a glue-nailed web frame for sloping ceilings, 3) It has tested and proved the glue-nailed W truss up to 40' spans. (The kingpost is cheaper at 32', but not at 28').

Today not ten new houses in a hundred use any kind of truss framing to cut costs, and not one of the ten uses anything better than the old nailed truss!

The economy of the newest trusses is much greater than the economy of last year's first glue-nailed trusses, which in turn was much greater than the economy of the old nailed truss.

How much longer can builders afford to pass up the bigger savings offered by better, lighter, cheaper trusses?

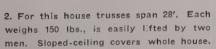
Any good lumber dealer can glue-nail the trusses or the builder can make them himself in a shed where he can keep the temperature from falling below 50°. They can be moved without damage in the first half hour, but after that the glue must be allowed to set for eight hours. FHA approves them only when assured that they were made under these controlled conditions. Instruction sheets on making the new trusses can be ordered for 25¢ each from the Small Homes Council, University of Illinois, Urbana, Ill. The roof pitch must be specified.

Look how much less lumber the three new trusses use!

Span	New glue-nailed trusses Kingpost sloped W			Standard W	
24′ 8″	37 2 x 4 2 x 4 13 89	40 2 x 4 2 x 4 25 130	48 2 x 4 2 x 4 10 108	75 2 x 6 2 x 4 none 162	board ft. top chord bottom chord sq. ft. plywood weight in lbs.
28′ 8″	69 2 × 6 16 156	42 2 x 4 25 150	56 2 x 4 10 142	87 2 × 6 none 185	board ft, chords sq. ft, plywood weight in lbs.
32′ 8″	75 2 × 6 34 195	71 2 × 6 36 210	85 2 x 6 18 218		board ft. chords sq. ft. plywood weight in lbs.
36′ 8″	IMPRACTICAL	IMPRACTICAL	94 2 × 6 40 265	IMPRACTICAL	board ft. chords sq. ft. plywood weight in lbs.
40′ 8″			104 2 x 6 40 287		board ft. chords sq. ft. plywood weight in lbs.

Notes: All figures based on 3-in-12 roof pitch. Sloped ceiling & W truss use 1/2" plywood gussets, kingpost uses cheaper 5/16" plywood. Conventional nailed trusses require about 175 nails.

1. Five men made the 23 sloped-ceiling trusses needed in 41/2 hours. Photo shows truss raised for glue "squeeze-out."









This builder made his trusses and roofed in his house in 36 man-hours

3. Two men on roof set each truss in place, two others help from below. House is by Memphis prefabber Fairhill, Inc.

4. Trusses were put up and sheathed in 31/2 hours for this one house. Test time should be less on production houses.





LU-RE-CO DEVELOPS A NEW SYSTEM OF NON-LOADBEARING WALL PANELS

Here is a simple answer to a tricky problem:

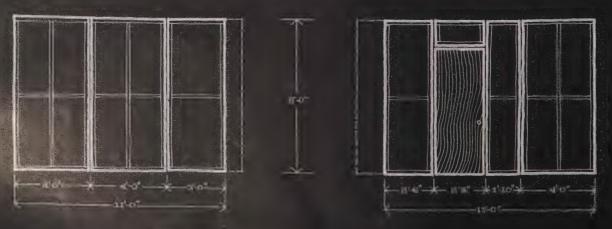
The problem: How can you panelize the interior of a house on a 4′ jig when the walls of each room may be any odd length?

The answer: Take advantage of the standard 8' ceiling height, so two 4' panels laid sideways will always be ceiling high. Then it will be easy enough to make them longer or shorter to fit any room.

This simple answer was worked out for Lu-Re-Co by the Small Homes Council after experiments with vertical panels failed because so many odd widths were needed. (See drawing below.) The panels will have one center stud and use about 20% less lumber than conventional framing 16" on centers.

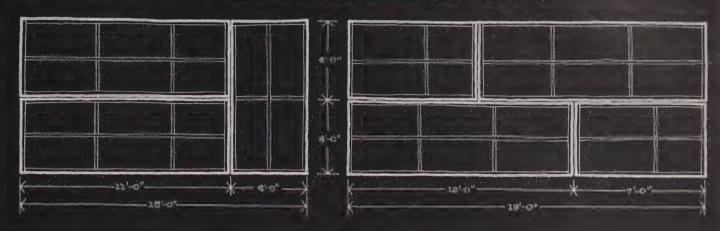
Increasing use of roof trusses will permit more and more use of such non-load bearing partitions. Even with conventional roof framing they can be used for one or more walls of every room.

You can't use 4' vertical panels, for you would need too many odd widths



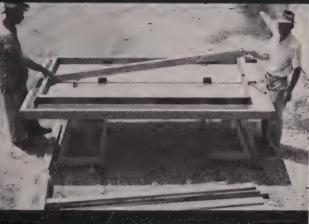
For example; An H' wall could use two 4' wide vertical panels, but the third would have to be an odd width. A door in the partition would usually require not one but two odd-width panels.

The big idea is to run the panels horizontally



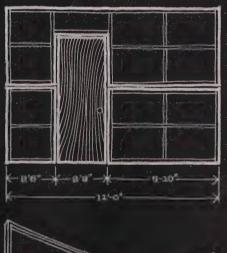
Right drawing shows how horizontal panels could be lapped for walls between 16' and 24' long. (sometimes with one vertical) to make any wall up to 16' long.

Left drawing shows how horizontal panels never longer than 12' could be pieced together



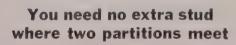
You can make the panel in jig time on the same jig

With a light 4' extension table (when needed) the regular Lu-Re-Co jig can make any panel length up to 12'. Wall board should be applied to one side only on the jig.



You can frame doors on the jig too

The rough opening in the upper panel should be cut $3\frac{1}{4}$ " wider than the actual rough opening to leave space for an extra 2' x 4' on either side to form the door bricks and tie the top and bottom panels together. For stiffness, wall board should be applied in a solid sheet covering the door opening and cut out after erection. Lower panels would be two odd lengths with wall board projecting $1\frac{5}{8}$ " to cover the extra stud at the opening.





The horizontal stud serves as a nailer wherever two of these partitions meet. The intersecting wall should go against the wall board side of the intersected wall.



Photos: Walter Daran

Round Table explores how to speed great savings in Materials Handling

Just what our industry must do to cut its materials handling costs \$1 billion a year is spelled out for the first time on the next seven pages.

This is Part II of the report of an industry Round Table jointly sponsored by House & Home, the Prefabricated Home Manufacturers' Institute, and the Lumber Dealers Research Council.

The Round Table will reconvene next month to consider ways to speed action on its recommendations.

The panel

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JAMES T. LENDRUM, AlA director Small Homes Council, University of Ilinois

MODERATOR

P. I. PRENTICE, editor and publisher House & Home

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R. L. SWEET, executive committee Lumber Dealers' Research Council

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JOHN E. BAUER, president

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ROBERT LYTLE, president Modern Homes Corp.

GEORGE E. PRICE, vice president National Homes, Inc.

Donald Scholz, president Schulz Homes, Inc.

HARRY H. STEIDLE, manager Prefabricated Home Manufacturers Institute

NATIONAL ASSOCIATION OF HOME BUILDERS

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Research Institute

RALPH JOHNSON, technical director

ERNEST ZERBLE, chairman

Small Builders Committee

JOSEPH GOLDMAN, vice president American Community Homes

WILLIAM WEIST, chief engineer

Pluce & Co.

LEONARD HAEGER, technical director Levitt & Sons, Inc.

AMERICAN INSTITUTE OF ARCHITECTS

JOHN HICHLAND, past chairman Home Building Industry Committee

Mechanized materials handling could save us at least \$1 billion a year

Round Table report: part 2

For the Manufacturers

POWER TOOLS

S. H. Cross, vice president and general manager Electric Tools Div., The Stanley Works

R. G. HORNER, vice president

Black & Decker Manufacturing Co.

· TRUMAN JONES, general sales manager

IRVING G. MEYER sales manager Delta Power Tool Div., Rockwell Manufacturing Co.

MATHEW PATULSKI

Porter-Cable Machine Co.

PAUL WATTS, vice president

Skill Corp.

FASTENERS

JAMES CLARKE, sales service manager

Ramset Fastening System, Olin Mathieson Chemical Corp.

WILLIAM COOK, assistant sales manager

Stanley Steel Strapping Div., The Stanley Works

EARTH MOVING EQUIPMENT

FRANK CONOVER, manager industrial sales Tractor & Implement Div., Ford Motor Co.

TRENCHING EQUIPMENT

ROBERT W. HUMES

Sherman Products, Inc.

J. A. Penote, vice president and general sales

manager

Cleveland Trencher Co.

FORMING EQUIPMENT

CHARLES A. SNYDER, chairman of the executive

Richmond Screw Anchor Co., Inc.

TOHICKEDS

ROY ROBINSON, president Pre-Fab Transit Co.

MATERIALS HANDLING

JAMES H. W. CONKLIN, former general sales manager

Phila, division

Yale & Towne Manufacturing Co. R. H. DAVIES, vice president

Clark Equipment Co.

R. L. FAIRBANK, sales manager

Tow Motor Corp.

RICHARD JAY, sales manager

Gar Wood Industries, Inc.

DAVID MILLICAN, vice president

American Tractor Corp.

ROBERT F. MOODY, sales manager

RUSSELL A. MOORE, sales manage: Traveloader

Baker-Raulang Co.

POWER MACHINERY

Nelson Thompson, vice president and general

Homelite Corp.

PAUL R. HATCHER, manager Materials Handling Div., Richards-Wilcox Manufacturing Co.

Ever since the Pyramids, the No. 1 building cost and the No. 1 building problem has been materials handling—getting our heavy materials to the site and in place for erection.

Today the building industry moves more heavy materials than any other industry except perhaps steel; it is one of the two main supports of railroad earnings.

Not counting 60 million tons for slabs and foundations, home building alone ships 30 million tons a year of products that go into houses above ground. Most of those 30 million tons get shipped, stored, and reshipped again and again as they pass from producer to fabricator to distributor to builder.

And most of those 60 billion lbs. are still picked up and moved not once but often 10, 25, or more times the same way the Pyramid builders would have moved them—by hand.

For example: even National Homes, which has carried mechanization very far, has to unload and stack 87,000,000 bd. ft. of lumber a year a piece at a time by hand, at a cost of \$150,000a-year-plus.

For a more common example: the average builder pays \$12 for the \$2-an-hour labor needed just to carry \$120 worth of dry wall from the street where it is unloaded into the house to the room where it will be used.

One-fourth of all the cost of a new house pays only for moving our heavy materials, we are told

That huge cost could be cut in half if our industry took full advantage of all the better materials handling tools and methods that are now available to us. That is another way of saying efficient materials handling could save us at least \$1 billion a year.

This \$1 billion saving can be compounded by greater use of prefabricated panels and other preassembled components. The more we mechanize our materials handling the bigger the components we can lift and carry and the less pieces we need assemble at the site.

So the more we cut our materials handling costs the more we can cut our erection costs too by building with parts instead of pieces.

In the more competitive years ahead we shall need every penny of these two-fold savings if home building is to meet the tougher and tougher competition of other industries and get our full share of the bigger consumer dollar.

Other industries mechanized years ahead of us

Now it is high time for us to catch up, learning from their experience, borrowing where they had to pioneer, starting off with equipment that has taken years to develop.

We cannot afford to move materials a few pieces at a time by hand

The basic way to cut our handling costs is to move our materials from first to last as "unit loads"—loads which combine scores or hundreds of pieces in a single package. These unit loads are far too heavy for human muscles, but they can be moved quickly and cheaply by mechanical muscles.

Our materials should be packaged as unit loads by the producers (see Problem No. 1 below), carried as unit loads by the railroads (see Problem No. 2), unloaded, stored, reshipped, and delivered as unit loads by the dealers (see Problems Nos. 4 and 6), handled as unit loads at the site by the builders (see Problem No. 5).

But here is the rub:

Today only one lumber dealer in ten is equipped to handle unit loads; only one box car in eight has the wide doors needed for unit loads; only one producer in a hundred is equipped to package and ship unit loads; only one builder in a thousand is equipped to receive unit loads.

What becomes of the unit load saving when a producer ships dry wall or roofing in 2,000-lb. packages to a dealer who cannot lift them? What saving is there (except in breakage) when 240 bricks stacked and strapped to a cardboard pallet are delivered to a builder who has to break up the load and pay the bricklayer's helper \$2 an hour to carry the bricks eight at a time to the place where they will be laid?

Here is a real challenge to industry team work and concerted action, for the more producers, carriers, dealers, and builders get into the act the greater the saving each can derive from his investment in materials handling equipment. For example:

The more producers ship unit loads, the more use and the more saving a dealer can get from his materials handling investment.

The more dealers mechanize their handling, the more profitable it will be for producers to shift from manual loading to unit loading.

The team work we need will involve hundreds of producers (most of them small), hundreds of mills (most of them small), thousands of lumber dealers (most of them small), and thousands of builders (most of them small). All these are potential customers for materials handling equipment. They add up to more potential customers than the manufacturers will find in any other industry—so many potential customers that it should be well worth the manufacturers' while to join the team and devote more study and sales effort to our problems:

1. To show more of us how to make better use of their present products, most of which are designed to move heavy loads and operate on factory floors or paved roadways;
2. To develop more small and versatile multipurpose units that even small operators could afford to own—versatile units that would handle loads of one ton or less over rough or muddy ground.



Lendrum: The better you handle materials, the more you can go into components, and the more you go in for components the better handling job you can do.



Moeling: For better shipping we need bulkhead cars, improved strapping methods, planned loads.



Johnson: You have a potential saving of \$2 to \$2.25 a M bd. ft., but it will cost the mills 55 cents more to do it.



Haeger: Our handling problem is out at the job site—getting these 4,000 lb. packages from the curb up to the house.



Mr. Roberson: Why ship 12,000 lbs. of wheels and underbody by rail?

This Round Table should reconvene with railroad and producer spokesmen

This Round Table is the first industry-wide conference ever held to consider the urgent and obvious need for industry-wide team work to cash in on the economies of mechanized materials handling. This Round Table report is the first attempt to spell out what each factor in our industry must do separately if we are all to reap these savings collectively.

Many more such industry conferences will be needed before our \$1 billiona-year goal is reached. In fact, our first recommendation is that this Round Table should reconvene early in 1956 with representatives of the building material producers and the railroads added to the panel. Until we get better cooperation from the railroads and the lumber mills, the rest of us can make only limited progress.

The very question these future conferences must decide is:

How big and heavy should the standard unit load be?

Until we agree on such a standard, producers will have no guide for their packaging; builders and distributors will have no guide for what size package they should buy equipment to handle.

Offhand, this much seems clear:

However large the unit load shipped from the mill may be, it should be packaged in multiples of smaller unit loads of 1,000 lbs. or less; and it should be so packaged that these smaller unit loads can easily be broken out. For three reasons:

- 1. Many lumber yards whose space is too cramped or whose surface is too uncertain to use big fork lifts can use small ones.
- 2. More builders and more lumber dealers will mechanize their materials handling if they can use smaller and therefore less expensive equipment.
- 3. The quantities of any one item used on the average house are relatively small, and the builder will often find it more profitable to divide even these small quantities into smaller loads and spot them near the point of use. For example:

A typical house uses 150 studs weighing a little under 2,000 lbs. The builder could save handling labor if they were laid down in two units rather than one—one unit near each end of the house. The $\frac{3}{8}$ " dry wall for an 8' x 12' room weighs about 500 lbs. Plywood roof sheathing weighs about 35 lbs. for each 4' by 8' panel, or roughly 1,000 lbs. for each end of a small house.

Obviously the small unit loads the builder would prefer at the site are too small for maximum economy of long distance shipment. For example, they would double the strapping cost for lumber (now about \$18 per car of 32,000 bd. ft. when the unit loads run to 3½ or 4 tons). But manufacturers should include dividers in their larger unit loads so a fork lift operator at the lumber yard can break them down without rehandling into such lightly-strapped smaller unit loads as might be approved as the industry standard for handling at site.

Fortunately most building materials are strong and rigid enough to need no skids or wooden pallets. Even bricks require nothing more than steel tape to hold them together on a cardboard pallet.



Humes: The builder can buy cheaper if he can adapt some existing unit to his needs.



Thompson: At our next meeting we must bring in the railroads, the mills, and the lumber associations,



Cook: Anything that can be bundled can be secured with steel strapping.



Hatcher: Some lumber dealers send out conveyors on the side of their trucks and unload right on to the foundations.

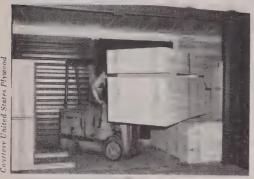


Fairbank: Some lumber yards are just impossible for industrial trucks.

We need . . .



unit loaders at the mill



wide-door box cars



high bulkhead flat cars



loads a forklift can split in small units



booms to move big pieces

Here are some of the problems

Problem No. 1: the reluctant lumber mills give five reasons for not mechanizing now

By weight half of all the materials used above the foundations of the average house starts from a lumber mill—the studs, joists, rafters, flooring, sheathing, siding, and some times the roofing.

That is another way of saying:

Until the lumber mills work with us and unit-load their products the rest of us can get much less than the full use, and much less than the full benefit, of any investment we make in mechanized materials handling.

Up to now the lumber mills have shown little interest in unit loading

In this they have lagged behind the wallboard manufacturers, the composition roofing manufacturers, and even the brick yards. For their indifference there are five reasons:

- 1. They can sell everything they offer in today's market without bothering to package it better.
- 2. They have had a good piece work deal under which two men working together load lumber by hand for about \$1 per M bd. ft.
- 3. They might sometimes have to invest up to \$80,000 per-\$1,000.000 of annual sales in the equipment and plant changes needed for mechanized unit-loading. The older the mill the bigger the new investment likely to be needed.
- 4. Only one lumber yard in ten is now equipped to receive unit loads, so it might be years before the mills could make full use of their unit-loading investment.
- 5. Only one order in ten comes in susceptible to unit loading (the lumber dealers answer they could and would change their ordering system if the mills gave them any incentive or encouragement).

For these five reasons most lumber mills refuse to sell their product in unit loads; others ask a prohibitive extra charge of up to \$5 per M bd. ft. The most progressive charge \$2 per M extra, which is more than a lumber dealer can save by fork-lift unloading, but still leaves him some profit in the subsequent economy of unit-load handling.

Eventually we believe the lumber mills, like all the rest of us, will find mechanical muscles cheaper than human muscles. They may not beat today's direct cost of \$1 just for loose loading a car by hand, but they could eliminate several costly handlings between trimmer and loading platform by putting a mechanical sorter and a unit-loader right back of the trimmer.

For their own profit, therefore, we believe the more progressive mills will in time mechanize their handling and offer lumber in unit loads at no higher price than loose-loaded cars. The other mills would have to follow.

To speed this change-over we recommend that lumber dealers and prefabricators would be smart to offer a premium of, say, \$2 per M bd. ft. to get unit loads. Their resulting saving on unloading alone would run close to \$1.50, and they could save substantially more on subsequent handling costs.

we must solve by better teamwork

Problem No. 2: the backward railroads do not have the right kind of cars

Wrong equipment and acceptance of badly loaded cars by the railroads are the two most serious obstacles to mechanized materials handling from start to finish in our industry.

This situation must be as unsatisfactory to the carriers as it is to us, for it is costing them a large volume of freight they should not be losing. The lumber mills now ship little more than half their output by rail.

To hang on to their remaining shipments and perhaps get back part of what is lost, the railroads have accepted open cars improperly loaded. These made so much trouble that some roads move them only by daylight. As a result, some cars take 14 extra days in transit, and the lumber arrives coated with soot from lying all night in the yards.

The cost of rail shipment is already a major item for our industry. We pay \$1.23½ per c.w.t. from the West Coast to the Middle West. That means the freight adds about 40% to our lumber cost—about \$32 on 1,000 bd. ft. that costs around \$80 F.O.B. Now the railroads are asking a further increase.

We believe the railroads could handle more products for home building at lower rates at a higher profit if they would provide the right equipment and then insist on proper loading for today's high freight train speeds and today's greater danger of impact damage in switching.

The railroads could profit too

With the right equipment properly loaded the railroads could carry at least 10% more lumber in a boxcar and at least 20% more on a flat car than today's average of around 25,000 bd. ft. (Trial shipments of properly loaded flat cars have gone as high as 38,000 bd. ft.) They could cut the no-income time while cars are being loaded and unloaded from two days at each end to less than an hour; they could run all cars night and day; and they could reduce damage claims.

In brief, the railroads have much to gain from unit loading—much to gain in lower costs, much to gain in added tonnage. They could help themselves as well as our industry by quoting incentive rates that would make it cheaper to ship cars of not less than 75,000 lbs. unit-loaded than it is to ship smaller carloads loose-loaded. A 10% freight differential would make it profitable for all mills and lumber dealers to mechanize overnight for unit loads.

We believe 75% of all lumber could and should be shipped on flat cars—compared with less than 10% today. Green lumber will actually benefit from being in the open; and if gypsum board can be packaged to travel safely in open cars we see no reason why, with proper loading, even kiln dried lumber should not do the same, protected only by a shroud of water-proof plastic or paper. Only oak flooring and other high grade finish lumber needs the added protection a boxcar offers.

Today more than 90% of all lumber is loaded loose into box-cars—loaded so loose that it is often badly impacted and it takes two men four hours to get out the first pieces. The 5-10% that travels on flat cars is loaded loose and then strapped top and sides to hold it. No wonder such shipments make trouble!

What we need from the railroads is:

- 1. Bulkhead flat cars; i.e., flat cars with strong high bulkheads at each end to keep the lumber from shifting on impact.
- 2. Wide-door boxcars; i.e., boxcars with double doors that provide staggered openings of not less than 6' on some of our cars today).

With today's growing trend to unit loading in all industries, we would assume that almost all shippers (except for loose grain) would prefer wide doors, but only 97,000 of the 740,000 boxcars last reported in service have them.

Either open cars or wide-door boxcars could be unit-loaded and unloaded with fork lifts in 30 to 40 minutes, whereas it now takes two men nearly two days to unload a loose-loaded boxcar a piece at a time.

The railroads would be smart to study and meet the needs of our industry without waiting for the shippers to wake up and start putting on pressure for the kind of equipment and rate structure that would be most profitable for all concerned.

Problem No. 3: the prefabricators need piggy back freight to ship further

Better shipping and better materials handling is even more important to the prefabricators than to anyone else in our industry. Each of them has, in effect, his own lumber yard. Each of them works through local builders, most of them small.

So the prefabricators have all the handling problems the rest of us face plus a special problem of their own—the problem of shipping a whole house hundreds of miles and then unloading the parts economically in the right order at the other end.

The lower the prefabricators can cut this house shipping and unloading cost the wider the market they can serve from a given plant.

Almost all prefabricated houses travel by truck, for the extra handling required for boxcar shipment adds not only cost but damage and confusion. Most prefabricators find 450 miles about the limit for truck shipment over the highway if their product is to compete with the costs of site fabrication, but the prefabricators hope that piggy-back freight will soon enable them to ship 1,200 miles by rail for no greater cost than shipping 450 miles now by highway. They might cut their piggy-back costs still lower with mobile vans, for these big containers offer most of the trailer advantages without the freight cost of shipping 12,000 lbs. of wheels and undercarriage.

Some prefabricators believe they could cut their shipping costs substantially if they could load panels flat instead of horizontally, to be unloaded with the same small fork lift on tracks that would also best serve the needs of the conventional builder.

We need . . .



piggy back freight for prefabs



or container vans might be better



industrial trucks for modern yards



forklifts on tracks for the smaller yards



lumber racks to stack lumber higher



small rough terrain units for the builder

Problem No. 4: the hemmed-in yards often lack space to use fork lifts

Smart lumber dealers are assuming leadership in the drive to mechanize materials handling from start to finish.

This leadership is good for our industry, for only the dealers can pressure the mills and the railroads for unit-loaded cars, and only the dealers can help the builders handle unit loads. It is also good for the dealers themselves, for mechanized handling can help them cut their costs and so increase their sales.

The lumber dealers have their own special problem to overcome before they can all mechanize

This is not a problem of equipment, for most lumber yards move a big enough volume of materials to warrant a sizable investment in the kind of readily-available roller conveyors and and fork lifts now used for factories and warehouses. As more lumber dealers become familiar with this standard equipment they will work out new ways and attachments to use it better.

For example, one lumber-dealer member of our panel has developed an end loader attachment for his fork lift to move hard-to-reach units in a boxcar. He is now developing an inexpensive electric roller to bring unit-loads to the door.

As more lumber yards use this equipment they will find new ways to make it do a better job. For example, one lumber dealer has developed an end loader to get lumber units out of freight cars. Now he is developing an inexpensive powered roller to move lumber units to the freight car door.

So the lumber yards' problem is not equipment; it is space and layout

Today only some 10% of the 26,000 yards are mechanized. Perhaps another 40% could mechanize with standard factory equipment, provided many of them are willing to spend real money for a new yard layout with wide paved aisles (to get the space many would have to install racks for higher stacking—see cut). Perhaps another 25% could be partially mechanized to use small fork lifts that could travel over soft surfaces on tracks or big wheels.

But the last 25% are cramped and hemmed in by buildings that have gone up around them over the years. These yards may soon face the choice of moving or going out of business as mechanization cuts their competitors' costs.



versatile units with other attachments

Problem No. 5: the forgotten builder needs smaller and cheaper tools

Even the biggest and most efficient builders still make little or no use of mechanical muscles to cut their above-ground handling costs at the site; yet these costs run to hundreds of dollars on every house. For this failure the reason is simple:

Nobody has been making the right equipment the builders need to do the job cheaper

The industrial truck makers have been so busy developing and selling equipment for factories and warehouses that they have had no time to study the builder's very different problem.

What the builder needs is different, for three reasons:

- 1. It can and should be much lighter and smaller. It need not lift more than a half-ton load, for even in half-ton loads all the materials for an average house could be moved from the street to the place of erection in less than two hours.
- 2. It must travel over rough ground, through mud, and over ditches. Perhaps it should run on tracks instead of tires.
- 3. It should be much lower-priced, for only 10% of the builders can spread their mechanical handling cost over more than 200 tons a year. Today the cheapest fork lift unit a builder can buy on tracks is designed for a three ton load and costs \$6,300.
- 4. It must be versatile. It must be so designed that its mobile power plant can be used for grading, filling, back hoeing, ditching, etc., when it is not needed for moving materials.

For want of the right equipment, mechanization today stops at the curb in front of the house

There bricks are laid down in 2,000 and 4,000 lb. pallets, asphalt shingles in 4,700 lb. bundles, asbestos shingles in 2,000 lb. From there on in everything is usually carried by hand. except that some builders set up lightweight roller conveyors between the street and the foundations. These are both useful and inexpensive. They cost about \$6 a running ft., or about \$250 for a 40' setback. They support about 100 lbs. per foot.

Fortunately there is now reason to believe that the low cost mobile equipment the builder needs is at last available as a by-product of the small farm tractor and the small army tractor, both of which are designed to travel over rough or muddy ground. Builders can now buy for less than \$3,000 a utility tractor with a 1,000-lb. fork lift attachment that can quickly be replaced with several other attachments. The next forward step to meet our needs might be to put this versatile unit on tracks instead of wheels. It is already available on half tracks.

Builders should also look into the second hand market. Lift trucks that cost \$6,000 new three years ago can be bought now for \$2,500 reconditioned and warranted.



Problem No. 6: the helpful dealer needs handling equipment on his truck

Here is a golden opportunity for the progressive lumber dealer.

The best way a dealer can win and hold more builder business is to offer a service that will cost the dealer much less than it will save the builder.

Even at \$3,000 the great majority of builders; i.e., the 95% who build less than 25 houses a year, will hesitate to buy their own fork lifts to carry their materials in from the street.

The dealer has the volume to justify a far bigger investment in on-site materials handling equipment than any small builder can afford. Sometimes he can even make this equipment pay off just in quicker turn-around time for his delivery trucks. In such cases it will cost him nothing at all to give the builder materials handling help that could be a very great inducement to buy from his yard.

Many dealers make their deliveries on roller-bed trucks, sometimes with an elevator on the tail gate. Some go much further to help their builders. Some make deliveries with straddle carriers, which can run 30 miles an hour on the highway and then take off across rough (but not muddy) ground to drop their load close to the house. Some send out roller conveyors with each delivery, on which heavy materials can be rolled from truck to site. (For example, they are using roller conveyors to unload flooring and dry wall onto dollies inside the foundation line.) Others put a scissors lift (cost: \$3,000) on their trucks to deliver asphalt shingles right to the roof. Others put a winch and an A frame on a second truck, or a fork lift on the tractor.

With small fork lifts on tractors now available at \$3,000 or less, perhaps the lumber dealers' best answer would be to carry one from job to job on the elevator tail gate or tow it along behind, as some dealers are already doing.



straddle carriers to make deliveries



roller conveyors for curb to site



scissors lifts to deliver roofing



by Robert B. Filley

The author has been a real estate market analyst and appraiser for 18 years, was a private consultant to HHFA in Southern California and Technical Director of the Chicago Land Use Survey. He has written books and articles on analysing and appraising, has lectured to many groups including the University of California. His consulting work takes him to all parts of the US.

How to reduce speculation in land buying

LET A MARKET ANALYST LOOK BEFORE YOU LEAP

You can insure a new housing development against almost everything—except your own poor judgment in selecting a site.

But you can double-check your judgment by means of a careful market analysis. A good market survey substitutes facts for guesses, and takes much of the speculation out of speculative building.

A market analysis helps a builder buy land for a *known* market, instead of trying to mold that market into conformity with whatever land is picked up at random.

This kind of research means analysing a particular community for its present and future growth, studying its employment and incomes, finding out how it spends its money. Such research includes a report on what other builders are doing, or are likely to do. It checks penetration of the market for houses in different price classes.

Ten years of post-war building have used up much of the easy markets and most "no problem" land.

Now, with increasing competition, ever greater care is necessary in selecting new areas and in studying possible sites—in financing and building the right number of right homes for the remaining markets.

Market analysis is a local matter. What is true for one neighborhood or one community is not always true for another. Builders who move from city to city or even from one part of town to another may meet alarming sales resistance if either their new location or their product is not quite right.

In a Midwestern city, some crackerjack merchandising failed to move elsewhere-popular contemporary homes because of a very conservative local market. So nearly a hundred beautiful and well-located homes are still vacant.

Learn everything possible about a town where you will build

When a large developer and builder, who wants to find new areas for future operations, employs an analyst, the analyst can get basic facts for him on all communities over 10.000 population in his territory. By checking each community's current construction and vacancies against (a) census data on unhoused or underhoused backlogs, (b) current population growth, and (c) current employment trends, cities can be found which rank highest. Then full-scale field market analysis of them can be scheduled.

Getting local facts includes knowing local ordinances, facts on development requirements and costs, data on available land, labor, financing. You should

have lists of key brokers and local officials.

Local zoning and engineering costper lot may be more favorable in one community than in another. You should know the requirements on lot sizes, paving, sewers, sidewalks, water, drainage. Check how many months' wait is required for a zoning change.

Be sure you know the facts about sewers and other facilities

In the Washington area, two tracts have been built and sold, but they are unoccupied because the municipal sewers have been delayed. In the same area, deposits on 500 homes may have to be returned because the authorities decided a stream could not carry the treated effluent of the project. In some Colorado cities, a builder must donate eight per cent of his land for schools and parks, a fact builders should know.

When a builder follows a program of market research and area analysis, and finds good land in a new location, he gets a discoverer's territorial rights, a pioneer's land prices, and an explorer's choice of sites.

A Southern California developer spear-headed the creation of a new flood-control district, opening a whole new area, with his project in the key location.

If you know the rules by which a city grows, you know where to buy land cheap so that the city itself helps to build up your values.

The wise builder doesn't pay today's premium prices to get the hot spot. Instead he bought acreage last year. Perhaps he plotted employment figures and income levels, investigated future construction of freeways and utilities, watched new plants or land absorption throughout the city.

Cities grow in new directions

Urban development trends continue outward along a favored axis for a considerable period. But such trends don't go on forever, and an analyst who is also a student of city growth will know when this outward movement has reached the end of its run.

In one Utah city, new housing developments along the favored boulevard have gone beyond logical limits and have created serious traffic congestion. Better sites are now in another quadrant where there is a new highway, and where builders can find large parcels of farm land.

In the Los Angeles area, public preference has shifted from the San Fernando Valley to San Gabriel, then to Orange County. It may swing back to San Fernando and to Palos Verdes.

A market analysis can tell you where not to build

One builder, drawn by the boom in a nearby city, had a market study made just before he was about to buy substantial acreage. The analysis showed that from 60 to 70 per cent of the housing inventory had been sold. But it also showed that sales were very slow and more projects were about to be started. Sunday crowds were only tourists examining furniture and decorating, could not qualify as buyers.

In another area an analyst was able to prevent a builder from buying land in what seemed an excellent location. A new steel mill had been erected and a cluster of airplane plants seemed to offer steady jobs. But a close market study revealed that families did not want to live in that area because of sand storms and that the airplane plants would soon transfer personnel elsewhere.

You may have the right land but the wrong time

Development too soon can be just as expensive as too late.

In Los Angeles there is an excellent development which is only now recovering (after a change of ownership) from a premature birth. Although the site was beautiful, other sites much closer to the city were almost as attractive. It should have been clear that the market for this land was several years off.

Even with the best of luck, the land you buy today will not be developed for months. Meanwhile, what will your competition be doing to cut down your share of the potential buyers? No matter how good sales are right now, you should know how much of the market will still exist when you are ready.

The time for opening model houses can be important to a builder

Perhaps new personnel at a key plant, the completion of major highways, or the closing of a large group of temporary houses will stimulate the market. Sales promotions may be affected by school openings or, in some agricultural centers, by payment for crops. Your rate of building for any particular piece of land is as critical as your timing.

Careful analysis will show the size of the total market, but your speed of building depends on the anticipated rate with which the market can absorb all houses. A fast-growing town, or a large backlog of families needing housing, calls for faster production than if the market is drawn from rentals, from families moving up in income brackets, or out of crowded two-bedroom houses. Your financing and your terms with the land owner depend to a large measure on your rate forecast.

Market analysis shows if land could be used for special purposes-

Study may show that your houses should be planned for minorities, the aged, replacement, or for holiday use, and will indicate what price house will sell best. It will tell you if there is a market for rental units. It will help you allocate land for rentals, for a shopping center, for schools or a park.

Design acceptability can be studied

Consumer preference surveys should cover a number of nearby tracts.

A study made for a California builder showed that both dry wall and slab construction were acceptable below \$14,-000, and that slabs were acceptable in some higher-priced GI tracts. It revealed that younger families in G1 tracts preferred contemporary design. But in FHA tracts families wanted front living rooms, conventional design. Ultra-modern designs sold slower.

Key factors in selling were kitchens, and families wanted built-ins and space for dining there. Entrance halls and fireplaces were next in importance, and in four-bedroom houses a second bath was important.

Facts like these vary from location to location and should be taken into consideration.

How does market analysis help to get mortgage financing

A professional analysis may bring prestige to the builder, shows he uses sound business principles, impresses a land owner that here is a good man to deal with. It likewise impresses favorably mortgage brokers, lenders, FHA and VA, as it gives them facts to base their decisions on, and creates a favorable business atmosphere.

Here's how a market analysis was used in an outlying California city: Having confirmed the market, and pinpointed the price class for the builder, it next converted the lender's loan officer, whose policy had been biased by an older, misplaced and unsold tract. Then it prompted the loan committee to raise their volume limits on the client's tract. Finally the lender itself used the report in reselling the paper in the East.

Get facts on the local employment market

In a Nevada city, gambling once predisposed lenders adversely. Here the analysis of the local economy showed a surprisingly favorable employment experience, revealed a logical support for all tourist traffic and emphasized the other sources, thus helping to brake through the financing log-jam.

In the South, market analyses prepared for an alert prefabricator are helping to overcome traditional resistance of some national lenders to investments in the smaller cities.

A good analyst sells not only his time but his experience and judgment as well. It is hard to make a fully documented basic analysis for less than \$1,000. The average cost on a medium sized tract will run about \$8 or \$10 a house. Many analysts work free lance or on annual retainers, but there seems to be a growing tendency for large builders, brokers and architects to employ analysts as permanent staff members./END



Not since the advent of the "Ranch House" has there been such a popular new house-type. And not since the 1890's has a house-type been so abused.

Is all this abuse necessary? Or justified?

On the next seven pages House & Home's editors show how easy it is to design a handsome split, how much sense it makes to plan a house on three levels, and how—with a few changes here and there—today's split level house can pass the stiffest tests of good planning and good design.

Top row: Seth Fulcher, Architect; E. B. Vaughters, Builder, Location: Seattle, Wash. (Photo: Dearborn-Massar). Jack Cohen, Architect; Dan Ostrow, Builder. Location: Silver Springs, Md. (Photo: Adams Studio).

Second row: Morris Lapidus, Architect; Joseph F. Carillo, Builder. Location: Huntington, L. I., N. Y. (Photo: Gottscho-Schleisner). Don Scholz, Designer & Prefabricator. (Photo: James T. Strong), Bottom row: Katz, Waisman, Blumenkranz, Stein, Weber, Architects; Knickerbocker Homes, Inc., Builder, Location: Huntington, L. I., N. Y. (Photo: J. Hex Langley). Jack Cohen, Architect; Dan Ostrow, Builder, Location: Silver Springs, Md. (Photo: Adams Studio).





OBVIOUSLY NOT-LOOK AT THESE



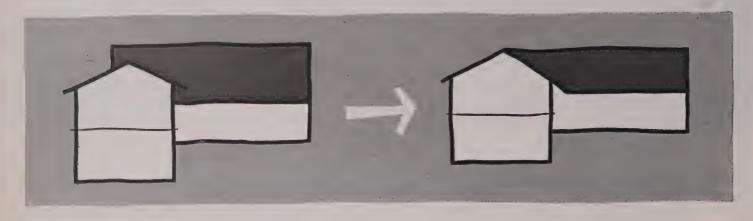






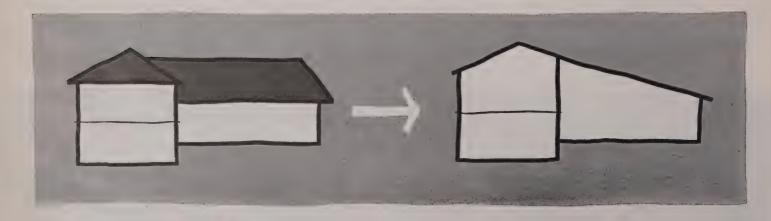
HOW TO UNSPLIT A SPLIT

UNSPLITTING THE ROOF: Simpler roofs look better, cost less, unify the house

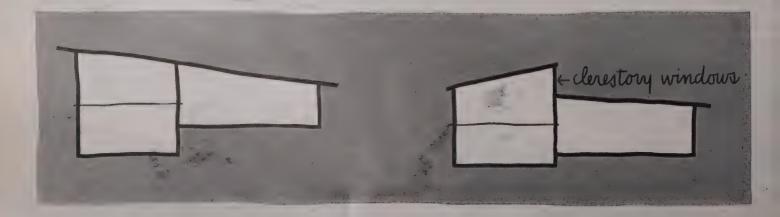


Don't build two separate roofs for one house (it costs more, makes the house look smaller).

Do simplify your roof structure (by aligning ridges and eaves, as shown above, or by using a single pitch, back to front, as shown below).



Other roof variations: Shed roofs make the split look longer; two-level roofs enable you to get a strip of clerestory windows along the bedroom level, thus help to light interior baths, hall and to cross-ventilate bedrooms.



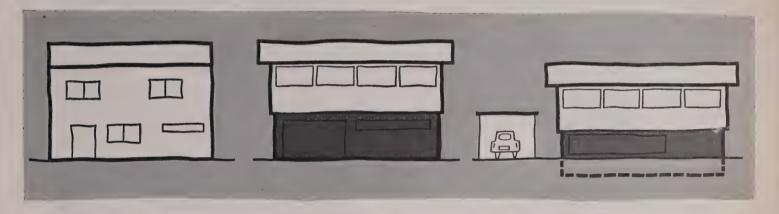
The chief trouble you run into when designing a split is this: Nothing lines up on the inside, so—automatically—nothing will line up on the outside.

And because nothing lines up on the inside, a lot of early splits were designed (and built) to look like two entirely separate houses "locked (as we said in April '53) in mortal combat."

So the first rule in designing a split is that it

should look like *one* house rather than two. (That way it will look bigger, as well as better.) The way to make a split look like *one* big house is to simplify its roof and its sides, to line up as much as you can, and to group together window and door openings. Just pretend the split is another simple house-design problem, governed by all the rules that govern good design in *any* house.

UNSPLITTING THE END: Stretch out your 2-story facade

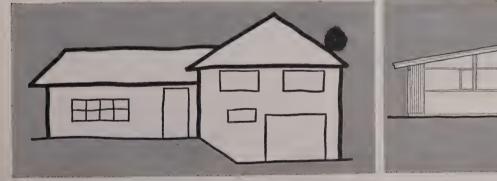


Don't count on the 2-story end of your split going unnoticed. (More and more splits now have the 2-story end facing the street, so your problem is to make that facade look best of all.)

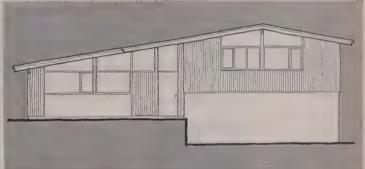
Do try to make the 2-story end of your house look longer and lower, in one of two ways—

- 1. Recess the lower floor and give it a different finish. It will recede even more if the finish is darker;
- 2. Bury your lowest floor in the ground, down to window-sill height (see sketch), and recess it as in the first example. This is possible especially where the garage is out of the basement (an increasingly popular trend—see p. 142.) Result: your tallest facade is only 1½ stories high, so the house looks 25% longer.

UNSPLITTING THE SIDES: Line up whatever you can



Don't make a patchwork quilt out of your facades



Do group your openings together and line up things like:

- 1. Window and door heads on the middle level with sill line in bedroom level;
- 2. Kitchen window sills on the middle level with floor line (if visible) of the upper level.

Fine example: Architect Seth Fulcher's new builder house in Seattle, shown in elevation above.

DO SPLITS MAKE SENSE ?

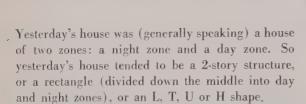
The answer is—yes, they do. Here is why:





Yesterday's house was a 2-zone house—with a day zone and a night zone. Result: 2-story plans, doublesquare plans, 2-wing plans.

NIGHT



Today's bigger house calls for *three* zones: night, day and multipurpose (family room, special storage, utilities, etc.) And one of the best solutions for a 3-zone house is a 3-level plan. No other 3-zone house can be built as economically, no other 3-zone house can be planned as compactly to fit on our small lots, and no other 3-zone house has those qualities *plus* excellent circulation and control.

DAY



Today's house is a 3-zone house—with a day zone, a night zone and a multi-purpose zone. One result: the 3-level house.

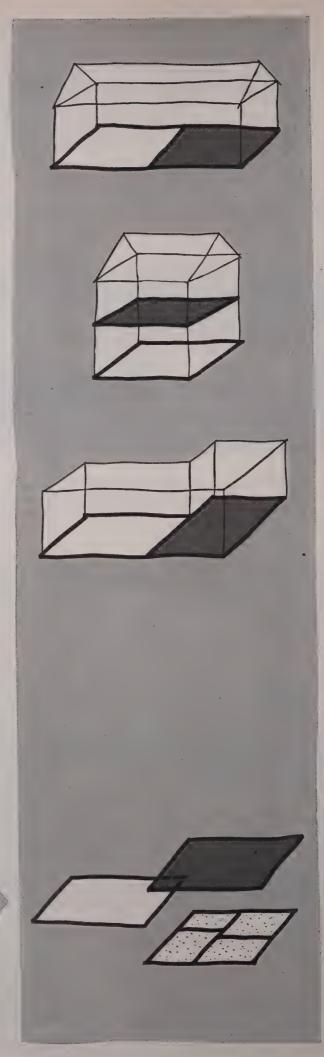
NIGHT





MULTI-PURPOSE

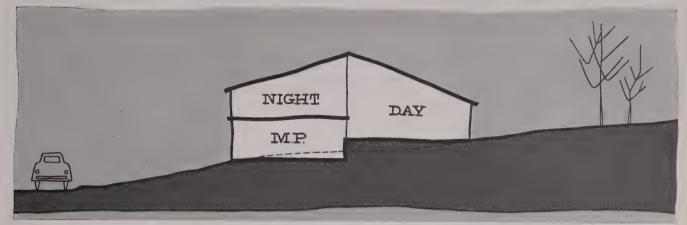




DO SPLITS MAKE SENSE ANYWHERE?

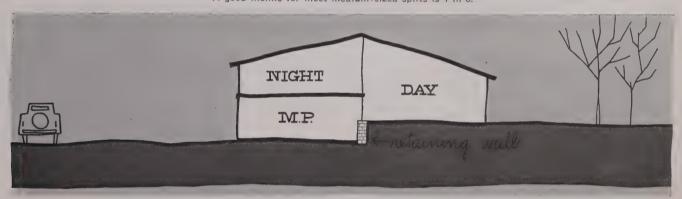
The answer is—just about anywhere

Splits make sense on sloping land, and for obvious reasons. Splits make sense on flat land as well—but on flat land they make sense only if you do something to the land—or to the split.

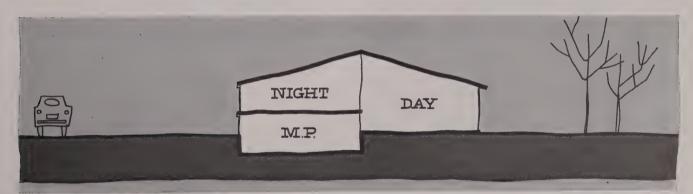


Splits make sense on a slope where two levels out of three have direct access to the garden.

A good incline for most medium-sized splits is 1 in 8,



Splits make sense on flat land if you fit the land to the split



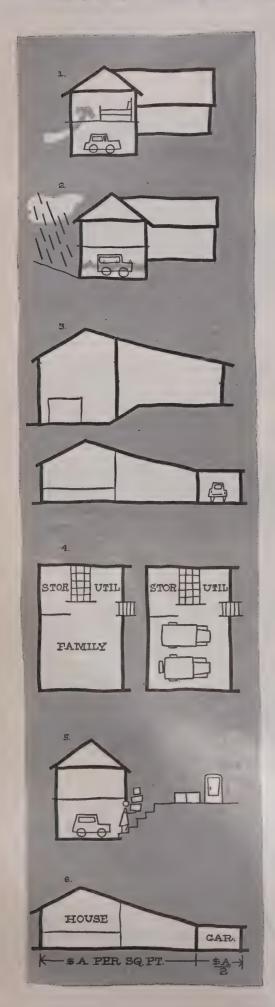
Splits make sense on flat land if you fit the split to the land

How to fit the land to the house. If you have a garage in your lowest level and a garden outside your living room, the best way to fit the land to your split is to use fill around the living-room end and to excavate at the garage end. Problem: how do you bridge the difference in grade and how do you keep water out of the garage?

The best way (unless your soil is sandy enough to absorb most rainstorms) is the one shown above (center): terrace your lot by using a retaining wall. That way you can be sure the next downpour won't wash your garden away.

How to fit the house to the land. If you decide that your house-cubage is too valuable to waste on a basement garage (see next page), then your grading problems are almost over: all you need to do is sink your lowest level into the ground to the window-sill height. This automatically puts your living room approximately on a level with the garden. (Semi-basement rooms with flowers and greenery outside the window sill can look very attractive.) Should you want to provide outside access to the lowest level, an areaway with a drywell will do the job very satisfactorily.

TWO TROUBLES WITH SPLITS



- 1. GARAGES IN THE WRONG PLACE
- 2. STAIRS THAT ARE TOO STEEP

← Where to put the garage

There are six good reasons why the garage should *not* be in the lowest level of the split—why it should be attached to the side of the house instead:

- 1. Basement garages often mean cold bedrooms above, occasionally produce smells and fumes, frequently require costly insulation and fireproofing.
- 2. Basement garages often get flooded. Steep grades around driveway make serious drainage problems.
- 3. Basement garages make some facades of splits look tall and short. If lowest floor were half underground, 2-story end of split would look 25% longer (see p. 139).
- 4. Basement garages take away too much space from playrooms, storage, utility rooms, etc. 1-car garages (now on way out) occupy about half of typical split-level basement. 2-car garages (now on way in) would knock out playroom altogether.
- 5. Basement garages force housewife to climb 6 or 7 risers to kitchen while carrying groceries.
- 6. And house cubage is expensive cubage—too expensive to use for a garage.

How to get rid of the stairs > ₩ >

The most urgent interior design problem in splits is how to kill the stairs before they kill you and your customers.

Most split-level stairs are too steep for comfort, and too bulky for good looks. Both defects need fixing—fast—because the stairs are the the chief circulation route inside the split. If they don't work, the house won't work.

On the opposite page is a simple formula showing how to design comfortable and safe stairs for splits. Needless to say, a more comfortable stair takes up a bit more room. So the next problem is how to make stairs look less space-consuming. Architects have used open-riser stairs for years: they are inexpensive to build, easy to clean, safe, graceful, transparent—so much so that they practically disappear. They are an ideal solution for many small split-level houses. The pictures opposite show several variations on the open-riser theme.



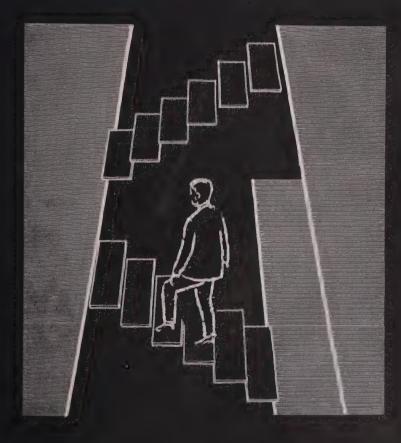








Open-riser stairs can look graceful and transparent. Result: they seem to take up less space than they do in reality. Here are three architect-designed examples (left to right): Vincent G. Kling, Architect, Twitchell & Rudolph, Architects and Carl Koch, Architect.





Rule-of-thumb stair-design formula long used by car-'penters says that you get a comfortable and safe stair if riser-height, multiplied by tread-depth, comes somewhere between 70 and 80. Below is a chart of typical riser-tread relationships that will produce a good split level stair,

r	T
6.75"	11.7"
7"	11.2"
7.25"	10.7"
7.50"	10.3"
7.75"	<i>9</i> .9"
8"	9.5"



In "ultra-conservative" Wilmington

BUYERS SWING TO CONTEMPORARY

One more smart builder in one more conservative market has learned what many home builders still find hard to believe—buyers will readily accept new, and different design if it makes sense.

What's more, in conservative Wilmington, Del., second-time buyers more than anyone else have shown that they prefer the better-designed, top quality houses they have been reading about.

At this time last year no builder in Wilmington (population 106,000) ventured to offer contemporary design, exciting interiors, fully-equipped kitchens or other new ideas—except that a few were timorously introducing split-level houses with so-so design.

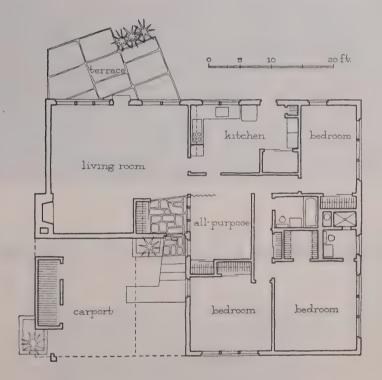
Last summer Franklin Homes brought out three colorful, radically new models on a 400-acre tract: a ranch house (above) and two split levels, at \$23,500 to \$31,000. No builder in Delaware had ever before opened a large tract in that price range, much less with contemporary design. Franklin expected to sell about 40 houses the first year.

Instead, they sold 60 in the first six months. And 50 of them went to home owners who bought because the new houses made their old ones seem hopelessly out of date.



Glass wall of living room overlooks rear patio. Larger window at left has six 2'x4l/2' sections. All windows in Franklin's houses are 2'x3', 2'x4l/2', 2'x6' or multiples thereof (except over front door). Standardization like this reduces cost.

LOCATION: Wilmington, Del.
BUILDER: Franklin Homes
ARCHITECT: Theodore Brandow
LENDER: T. B. O'Toole, Inc.
DECORATOR: Jon G. Govados, Jr.



Here's one-floor open living



Fully equipped kitchen includes eye-level oven, built-in range, garbage disposer, exhaust fan, wall clock, wall cabinets with sliding glass doors and interior lights. Refrigerator is optional extra.

Front entrance is paved with flagstone. At far left is kitchen, which opens both to living room and to the all-purpose room separated from foyer by opaque plastic wall. Access to bedrooms is off left through all-purpose room.



This large split-level sells fast at \$31,000

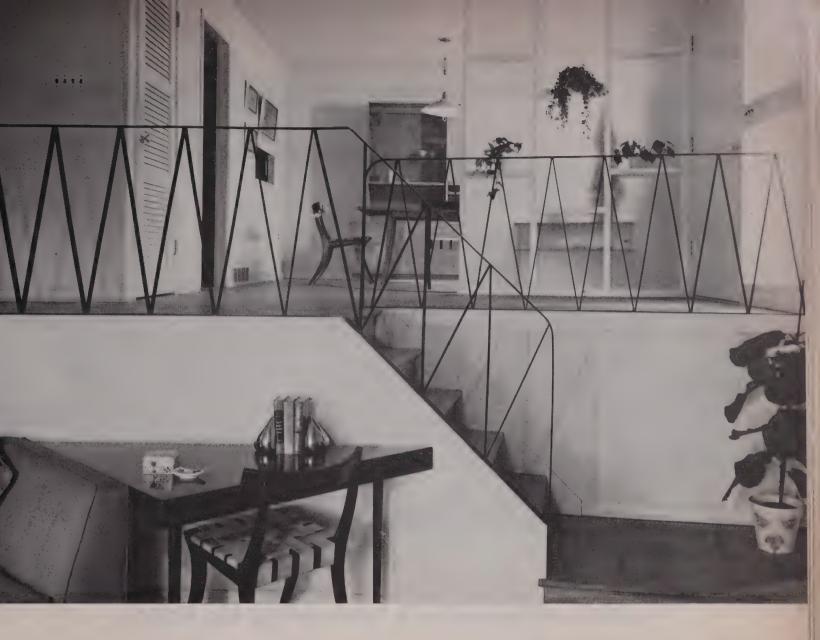


Big split-level can face almost any way on a lot, for it is so designed that the lower floor entrance (off patio, at right here) can serve as main entrance. Trees are saved by the builder wherever possible.

Twenty Wilmington families couldn't resist buying this house that is so deceptively plain on the outside but so quality-filled inside. (The first buyer was VA's chief underwriter in Delaware.)

The builders pulled out all the stops in furnishing this 2,300 sq. ft. split-level (it has a large basement and double carport). The two photographs shown above were taken from one end of the 26'-8" x 13'-5" living room. At left is view of living room looking toward the sound-conditioned family room at rear. Photo at right shows dining room and flagstone-paved foyer. The clean, ribbonlike design of the stair rail links both parts of the house, helps to effect open feeling.

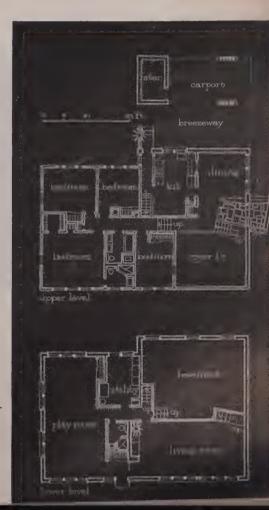
Equipment includes more than \$1,000 of electrical wiring and fixtures (note the living room two-way lamp and dining room pulldown lamp shown above), a well-equipped kitchen (with a bread-and-milk valet opening outside at back door), air conditioning, wall safe in the master bedroom and a built-in radio and communications system with plug-in for hi-fi record player.



because this interior greets prospects

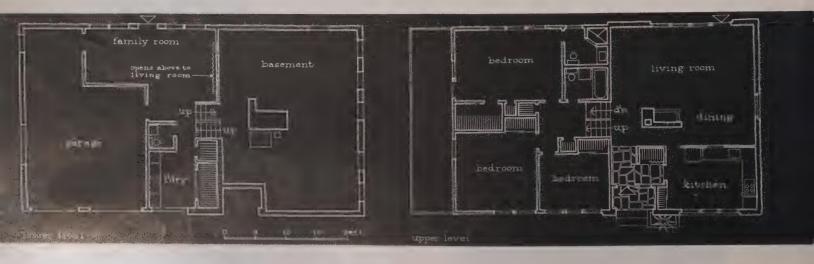


Louvered door and folding screen for the pass-through are used between the dining room and kitchen on main level. The kitchen includes breakfast area. Floor plan > (right) shows excellent relationship of kitchen to carport (the latter a successful departure from the usual split-level's garage located in the house itself).





This is Wilmington's best-selling big house



This handsome \$27,500 split-level has 2,100 sq. ft. of well-planned living area (plus garage and 650 sq. ft. basement). Although the most radical of Franklin's houses—its front kitchen is the first offered in the area—this house has sold best.

The central staircase offers easy access to all

levels; bedrooms have big closets, sloping ceilings; laundry commands view of front entrance; the kitchen is fully equipped, and the living room opens onto paved patio as well as to the family room. The two can be closed off from each other by a folding door, shown in photograph opposite.

Sales appeals are many, including ...



Lubitsh & Bungarz

familiar furniture for the hesitant buyer

Franklin furnished the split level at left with period furniture (above) to reassure buyers that their old furniture would fit the new surroundings. (This paid off: the house with period furniture sold better than the builder's other two models.) In all, Franklin spent \$20,000 furnishing three models.

That is only one of many reasons for what happened in Wilmington. Franklin's success cannot in any sense be written off as a fluke. It is the earned result of months of careful planning by men who knew what they wanted to do and had the courage to try. No rash and lucky newcomer to homebuilding, Franklin's President Leon Wiener is executive vice president of the Delaware Home Builders Assn. Last year the company won an Acapulco award for outstanding merchandising.

Here are some of the things that Wiener, his partner Irving Megebow and sales vice president Henry Weinstein did to make sure of succeeding:

Good location. Franklin's Green Acres tract on high, mostly wooded land four miles northeast of downtown Wilmington is adjacent to an old, exclusive residential neighborhood. The company paid \$3,000 per acre for raw land.

Architect designs. Theodore Brandow, young (30) Philadelphia architect, was engaged months ahead to develop the plans. His job was threefold: (1) to provide up-to-date designs that (2) incorporated sales features the builders felt prospective buyers wanted at (3) a low enough cost to make the prices competitive. Brandow spent most time engineering the houses to take standard

dimension materials and "to keep to a minimum the time the carpenters spend on thinking." (Brandow works for merchant builders on an average fee basis of \$750 per plan plus a royalty of \$25 per house. About 800 houses were built from his designs last year around Philadelphia.)

Air conditioning. All the houses have three-ton, air-cooled air-conditioners. The builders estimate the cooling system will add only \$85 a year in utility charges.

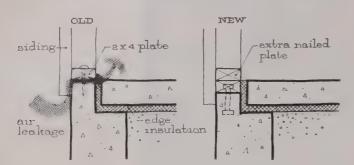
Help in selling old homes. Eighteen of the builder's first 60 sales involved helping prospective buyers sell their old homes. Franklin chose a realtor whom it knew would try his utmost to sell the old homes in the three to four months during which the new house was being built. He succeeded in all 18 cases.

Adequate wiring. These houses have about \$1,000 of electrical services and fixtures. They feature 3-wire 115-amp. entry boxes, 20 to 24-circuit load centers, multibreaker service boxes, 240-volt lines for range and clothes dryer. Wall outlets are spaced every 6'. Recessed living room lights, backlighted kitchen cabinets and fluorescent lamps are included.

Top mechandising. Brochures on each house give more than 1,000 words of technical information on materials used. The ranch house has a basement which accounts for \$1,700 of its cost. "It's easier to sell the house that way," Leon Wiener says. "If they don't want a basement, we just knock off \$1,700. It's harder if you have to add \$1,700 for a basement."/END.

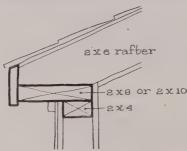
4 MORE WAYS

Slab detail stops air leakage



One of Don Drummond's biggest complaint headaches in Kansas City was drafts caused by air leaking into the house under the plate at the juncture with the slab. Even calking was not a sure answer. He now adds 2" of gravel to his old 6" base, raising the slab that much higher, then uses an extra 2" x 4" plate nailed to the customary one bolted to the foundation wall. Any cold air that might seep in under the plate is thus dead-ended against the edge insulation and the slab body, and the calking operation is no longer necessary. Best of all, says Drummond, "it has killed all complaints, and eliminated 'go-backs'."

Top plate doubles as soffitt

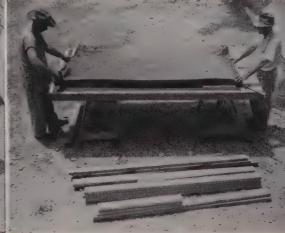


Box cornice work can consume expensive time, so M. Clarke Smith, of Southampton, N.Y., uses 2" x 8"s or 2" x 10"s as a combination double plate and cornice soffitt. The extra plate acts as a nailing base for the angled ends of the 2" x 6" rafters, and with the addition of the fascia board, becomes a completely enclosed cornice.

Conventional outriggers and exterior grade plywood soffitts are eliminated, and Smith estimates his net savings at 50ϕ per lin. ft.



Insulation is stretched to full size



Tight fit is obtained on four sides

32 panels are insulated in one hour

Further refinement of the Lu-Re-Co panel system has been made by Lumber Dealer Fred Dill, Carmel, N.Y., who applies 4'x8' blankets of foil-faced insulation while the panels are still in the jig. All 32 panels in his 1,000 sq. ft. house are insulated in an hour, compared to three to four hours formerly, and Dill claims that a tighter, more efficient job results. In the early stages of construction, the foil face

TO BUILD BETTER FOR LESS

59

Visual progress record cuts down construction time

Production control is just as vital to home building as to any other industry. An aluminum pegboard system enables Seattle's Century Builders to see at a glance the exact status of every house in their six widely separated building locations. This visual control helped cut building time from 90 days per house to 72 (1955 volume: 680 houses).

Each vertical row of holes (60 deep) represents a lot. Top 48 represent major operations (materials, construction, or inspection), with 12 spaces below reserved for buyer optionals. As work is started or material ordered, a yellow peg (actually a golf tee) is inserted. When completed, the control room changes the yellow peg to red.

Superintendents are responsible for a telephone report on the start and completion of every operation. Status of house is immediately changed on the control chart and necessary instructions given for the next phase of the work. Auditors use the board to authorize payments to subs and suppliers (no payments without a "red flag"). The controller can give buyers up-to-the-minute progress reports by telephone without ever leaving his desk.



Photos: Courtesy of Kimberly-Clark Corp



Sheathing goes on over insulation



Strips go around window opening



Finished panel has conduit attached

impresses buyers by its neat appearance, Dill adds.

The compressed form of the blankets, as shipped (enough for a whole house in one carton), keeps required storage space to a minimum. Electricians and plumbers like the fact that they can do their jobs without having to tear holes in the insulation. Dill estimates the cost of insulation at approximately \$31 per M.

BIGGEST BUILDERS OF 1955

Tom Lively's Centex Construction noses out Bill Levitt for greatest volume of starts, but Levitt builds whole towns

The typical giant home builder in 1955 put up a three bedroom two bath ranch type house on a small to medium sized lot. He sold it for \$12,000 to \$15,000.

The leaders often achieved their sales volume by marketing under give-away VA terms or offering more cubage per dollar than their competitors—thanks perhaps to the sheer magnitude of operation. Although design tends to be undistinguished, some plans are excellent.

This composite picture emerges from House & Home's third annual survey of the men and firms who started * the largest number of 1- to 4-family dwellings (excluding prefabs). For the top 15 (whose best selling models are shown on the next five pages), both total output and percentage of the US total are shrinking. Last year's 15 leaders started 31,659 houses—2.4% of the national total of 1,311,100 private starts. In 1954, the 14 biggest builders put up 34,125 of the nation's 1,201,700 private homes, 2.8% of the total. They accounted for 41,753 (3.7%) of 1953's 1,102,400 private starts.

The news that Tom Lively's Centex Construction Co. has displaced Community Builder William J. Levitt as the nation's biggest home builder requires special explanation. Levitt, amid a campaign for easier VA and FHA terms, has been announcing that sales at his mammoth Levittown, Pa., project have become

"very bad" lately. Alone among the nation's leading men of housing, Levitt refused to furnish figures on his 1955 starts. HOUSE & HOME compiled them from official sources (see caption, next page).

As in 1954, Levitt was the the only biggest builder whose output was concentrated on one site. Nine others confined nearly all their operations to a single major market area—and seven of these are in Los Angeles and southern California. Centex, F&S Construction and Earl W. Smith remained for the third year in a row leaders among the new breed of operators who achieve volume by spreading their activity over as many as 20 cities or even four states. This mobile-builder group is joined this year by Florida's Mackle Co., often a runner-up in previous House & Home surveys. The Mackles are one of five newcomers to the 1955 list; turnover is high in the top ranks.

Most of 1955's big 15 are planning to hold the line on prices this year. Seven say they plan to boost production; four plan cutbacks because of poor sales. Says Walter Bollenbacher of Los Angeles: "Until we get rid of what we have, we're not building a lot more. I think the pipeline is filled for six months."

1



President Tom Lively (above) heads an executive team notable for its youth. Lively is 35, Only official of Centex over 45 is Executive Vice President Ira Rupley, 74. E. L. Higgins, vice president for construction, is 38, Osborne Fernald, secretary and purchasing agent, is 42. Says Rupley: "We departmentalize to a farethee-well. Our ability to build anywhere in the US is based on this."



CENTEX CONSTRUCTION CO. started 3,214 single-family homes in such widely-scattered cities as Dallas (its headquarters), Garland, Grand Prairie and Houston, Tex., San Jose and Anaheim, Calif. The firm also began 476 units of luxury apartments.

The 1086 sq. ft., three-bedroom, one-bath brick veneer model shown below is typical of Centex output. It sold for \$10,950 (VA no-down,

FHA \$950 down) in Dallas. This house, designed by Architects Milam and Roper of Dallas, was one of ten floor plans (each with three different elevations) offered in its subdivision. Says Centex: "We try to make the customer feel he is getting a custom house without actually giving him one." Centex plans to enter several new cities, build 5,000 houses this year. A major design change will be adoption of window walls.

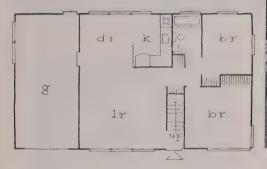


^{*} Starts figures are based on a canvass of NAHB chapters, direct reports from builders involved and, where pertinent, a double-check of building permits, plat filings, title records or mortgage recordings.

2



Peppery William J. Levitt, president of Levitt & Sons, takes pride not only in being the Henry Ford of housing, but also—as a TV documentary film about Levittown observed last May—in being creator of "the biggest planned community since the Continental Congress invited L'Enfant to plan Washington, D.C."



LEVITT & SONS started some 3.000 single-family houses in Levittown, Pa. The starts figure, which President Bill Levitt has refused to confirm or deny, is derived from a check of tax assessment records in the three Bucks County townships, lot-approval records of the county planning commission, data collected by editors of the Levittown newspaper, building permit figures compiled by the state. All are in close

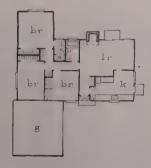
agreement, although one Levitt subcontractor says he built closer to 2,500 than 3 000 homes in '55. Says Levitt: "Building houses is the simplest part of our job." The big part, he feels, is creation of a complete community with facilities for 70,000 inhabitants. The best-selling "Jubilee" model (pictured) has three bedrooms, one bath, sells for \$10,900. This year, Levitt hopes to complete the town (about 4,000 more houses).



3



Lloyd L. McDonald (left) and Adrian Wilbur (right) are general partners in California's biggest home building firm of 1955. Wilbur handles home building, McDonald heavy construction. Bernard McDonald, in semi-retirement, retains a small interest in the firm. The company planned to start 1,600 homes last month—almost as many as the 1,917 it built during all of 1954.



McDONALD BROS, reported 2,842 starts—nearly all in the Los Angeles-San Bernardino, Calif, area, with a few in Fresno and Reno and 120 government radar station houses in scattered eastern states.

Among their best sellers is this 1,225 (plus garage) sq. ft., three-bedroom model which sells for \$13,165 on a 60' x 100' lot. The design, by Randall Williams and Leonard Poes of the com-

pany architectural department, provides a living room which should be easy to fit with furniture, a well-sited fireplace. The house was offered on no-down, \$86 a month VA terms with built-in range, oven, refrigerator. Plans for this year: from 2,750 to 3,250 homes, mostly priced from \$13-\$15,000, mostly with four bedrooms, two baths, two-car garage. McDonald will continue to avoid contemporary design.



Mayfield Photos, Inc.

4





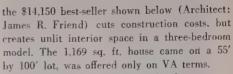
Milton Kaufman (1) and Don Wilson (r) have been building partners for three years.



KAUFMAN-WILSON reported 2,527 starts in Torrance, West Covina and Puente, Calif. (all Los Angeles suburbs). All were three- or four-bedroom models from 1,110 to 1,200 sq. ft. with prices from \$13,725 to \$14,300.

The firm credits much sales success to sticking to time-hallowed items like lath and plaster walls, hardwood floors on concrete wall foundations, pitched roofs. The square shape of

Bob Erikson



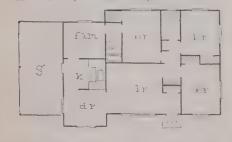
This year's plans: another 2,500 houses, provided VA terms are eased again; if they are not, fewer.



5



President Sam Hoffman of F&S (which stands for father & son) is former freight trucker.



F&S CONSTRUCTION CO. started 2.378 houses in Denver, Salt Lake City, Phoenix and Chicago. All were three bedroomers priced from \$7,450 to \$14.950. F&S has 70-employee headquarters in Phoenix (where it has built some 3.000 homes) although the firm is no longer building there. President Sam Hoffman, 55, keeps in touch with his far-flung operations with two private company planes (ten-passenger Lockheed

Al Frederic

Lodestar and a five-passenger twin Beech).

The two-bath, 1,176 sq. ft, house shown below accounted for some 50% of F&S sales. It cost \$9,250 in Salt Lake City with concrete masonry and \$11,000 in Denver with brick veneer. F&S frankly stresses space for the price, plans to build "about the same" number of homes this year, but at higher prices.



6





Walter Bollenbacher (left) and Louis L. Kelton (right) have been building for 35 years.



BOLLENBACHER & KELTON, operating in Los Angeles and San Diego Counties, Calif., began 2.287 homes with two to four bedrooms, 900 to 1.300 sq. ft. and price tags from \$11.000 to \$15.000. Some were ranch style, some conventional, some contemporary, but Walter Bollenbacher disclaims: "You can't get unusual features at those prices."

One of his best sellers was this 1,146 sq. ft.

(plus 350 sq. ft. garage) house designed by Architect Maxwell Starkman. It first sold for \$12,675 with no-down VA terms, is now priced at \$12,875. Average lot size: 60' x 105'.

Plans for this year hinge on how sales develop. Right now, says Bollenbacher, "houses aren't selling." He puts part of the blame on sky-high land costs which mean homes "have to be too expensive."



Elson Alexandre



Richard S. Diller



RICHARD S. DILLER, in association (separately) with Richard S. Gunther and Irving L. Kalsman, accounted for 2,126 housing starts in the Los Angeles area.

The Swiss ranch chalet pictured below, designed by Architect Martin Stern Jr., has four bedrooms, two baths, 1,238 sq. ft. (plus patio and garage), a semi-automatic dish washer and musical door chimes. It sold for \$13,200 on lots averaging 60' x 100'. The Diller combine also built homes ranging from \$12,000 to \$17,500. Like most big Los Angeles builders, Diller pumps up sales with big display ads in Sunday realty sections. Last year, the copy appeal was tilted heavily toward nothing-down VA terms.

This year, Diller expects to build about 2.000 houses in the San Fernando Valley, 600 in Long Beach, 300 near Puente.







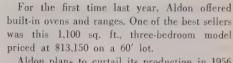


Aldon is partnership of (1 to r) Willard Woodrow, Don Metz, Ira Oberndorfer.



ALDON CONSTRUCTION CO. began 2,093 homes in Los Angeles and San Diego and in Orange County between the two. All had three or four bedrooms, two baths. They varied from 1,100 to 1,350 sq. ft. at prices from \$12,750 to \$15,600. All were offered on VA terms-many with negative no down payments. In San Diego, Aldon was teamed up with Del E. Webb Construction Co., builder of 840 homes during the year.





Aldon plans to curtail its production in 1956 because it is so hard to find cheap enough land where people want to live and because of stiffer VA terms. Aldon figures it has built some 25,000 homes in postwar years.











Mackle brothers are Vice Pres. Frank E.; Pres. Elliott J.; Sec.-Treas. Robert F.



THE MACKLE CO. of Miami started 1,774 homes in nine south Florida locations from Miami to St. Petersburg. Many are small, but the prices are by far the lowest of any homes sold by the biggest builders. Mackle houses cost \$4,950 (for a one-bedroom unit) to \$7,750 (for their best-selling three-bedroom model).

The latter, shown below, looks bigger than its 881 sq. ft. because Architect James E. Vensel

wisely carried the roof line over the screened porch and carport. This house was sold in one Mackle subdivision for \$175 closing costs VA, and in another for \$1,100 down and \$45 a month. It came on lots at least 75' x 100'. Mackle houses, like so many in south Florida, are CBS construction. This year, the company plans 2,000 houses, is also negotiating with four union groups for big retirement villages.



10

Andy Oddstad, 37, is a nephew of Big Builder Henry Stoneson of San Francisco.



ODDSTAD HOMES, one of the several corporations headed by NAHB Director Andres F. Oddstad Jr., began 1,640 homes in five tracts in San Francisco suburbs mostly on hillside sites. One of the best sellers was this 1,300 sq. ft. ranch style house (plus 437 sq. ft. garage). It was priced at \$16,500 on conventional or FHA terms, with a 7,000 sq. ft. lot. Other Oddstad houses

cost from \$9,750 to \$22,500. Oddstad got him self a lot of national attention last year when he agreed to sell the visiting delegation of Russian housers a split-level for \$8,000.

This year, Oddstad hopes to step up to 2,000 houses, including some in the Oakland hills on sites so steep that other builders have shunned them for years.

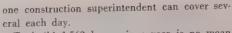




Earl "Flat Top" Smith gets big kick out of designing all his houses himself.



EARL W. SMITH started 1,562 units in 20 cities spanning 350 miles of northern California. Chief concentrations were 260 homes in Santa Clara County, 125 in Sacramento and some 240 in the Eureka-Fortuna area. Smith builds small projects in towns smaller than most big builders dare venture. His method involves central precutting in his El Cerrito headquarters and spacing of building sites close enough together so



To build 1,562 homes in a year is no mean feat. To do it while serving as NAHB president is something nobody else has ever done. Even so, as with most NAHB presidents, Smith's volume suffered; in '54 he started 2,816 homes. Typical model: 1,161 sq. ft., four-bedroom flat top for \$9,400. This year: about 1,000.





Jerome Snyder (1) and Max Levine (r) are partners in three-year old Midwood Homes.



MIDWOOD HOMES started 1,530 houses in the Los Angeles area. Eighty per cent had three bedrooms and den, the rest two bedrooms and den. Prices ran from \$13,000 to \$25,000. Best seller was this 1,200 sq. ft. house on a 65' x 120' lot for \$13,000. On no-nodown terms, the subdivision sold out 221 units in one weekend.

Such success is understandable. Architects Palmer & Kreisel gave Midwood a handsome structure with a first-rate floor plan. Praiseworthy features: 1) one bedroom separated from others, 2) good sized entry lobby—easily controlled from the kitchen as is the family room, 3) good traffic circulation.

Midwood's principals, Jerry Snyder, 25, whose father is a small contractor in Anaheim, and Max Levine, 38, his brother-in-law, have been in building since 1953. '56 outlook: 2,000 homes.





Gladser Studio

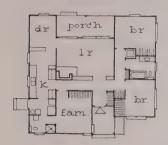
Daniel (1) and Edgar Cohn

DANIEL AND EDGAR COHN, brothers who operate under a variety of corporate titles in the Los Angeles area, started 1,529 homes—all three bedroom models. Size ranged from 1050 to 1250 sq. ft., price from \$12,000 to \$15,000.

The two-bath, 1,250 sq. ft. version shown by

The two-bath, 1,250 sq. ft. version shown below sold for \$14,575 in the San Fernando Valley, with no-down terms available to veterans, Lots averaged 60' x 100'. Floor plan requires some 30' or 40' of inside corridor space to make it work.

The Cohn brothers hope to put up 1,600 homes this year. These will include some at \$12,000 but others higher-priced than in 1955 at \$16,000 and \$18,500. Like many other biggest builders in the Los Angeles area, they say they face no land or mortgage problems.





Tom Kennedy
14



Alec Lee Branden is the son of a Norwegian-Canadian builder.



A. L. BRANDEN, 34 year old housing newcomer who went into the mass market in 1952 with mostly borrowed capital, reported 1,513 starts on three tracts around San Francisco Bay. (At one, he was teamed up with Big Builder Mark Taper of Los Angeles' Lakewood Village fame.)

Branden was offering three basic houses, priced from \$10,600 to \$15,900—all with three-

bedrooms and two baths. Most popular model (pictured) was a 1,120 sq. ft. (plus garage) house selling for \$12,200 at Hayward and \$12,250 at Sunnyvale. It had a family room and two-way, free-standing fireplace, was offered under no-down, 30 year TV terms. Merchandising includes a huge sales office at one tract,

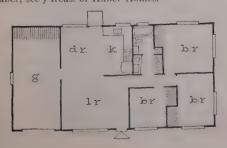
This year, Branden hopes to up production to 2,500, with prices about \$500 higher.







Donald L., exec. vice pres. (1) and Charles H. Huber, sec'y-treas. of Huber Homes.



HUBER HOMES of Dayton, Ohio started 1,265 houses there and in Sidney, Ohio. The firm builds only one model, varying between hip and gable roofs and left or right floor plans. It is a 1,060 sq. ft., three-bedroom, one-bath brick-veneer-on-slab house selling FHA and conventionally for \$12,450 on 7,500 sq. ft. lots.

The company upped production from 32 houses in 1953 to 531 in 1954 and then to last

year's record despite the unexpected death of founder Herbert C. Huber in mid '54. His sons. Charles H. Huber, 26, and Donald L. Huber, 23, took over along with a son-in-law, William G. Brennan, 27, who is general sales manager. The firm also began selling its building package to other builders (June, News) but the houses counted here were both fabricated and erected by Huber. '56 outlook: 1,500 houses at same price.



HOW A SMALL BUILDER GROWS BIGGER

"I switched from cars to houses . . .



there's more to sell in a house"

"I learned the building business



from reading the magazines"

"I build one-of-a-kind houses



but I sell like a merchant builder"

Horouny

Three things have made Ray Wright successful—motors, magazines and merchandising.

Ray Wright is a young (36), energetic builder in Columbus, Ga. He is one of the few people qualified to make a comparison between construction and the automotive field—a comparison, trite because of constant repetition, suddenly fresh when Wright starts talking. He switched from selling used cars to building because he was convinced that there's more to sell in a house than in a car. Five years of success as a builder have strengthened this conviction.

"But we have to prove to the public that home builders have much more to offer buyers than automobile manufacturers do."

Ex-paratrooper Wright was still a sergeant in the Army when he started in the used car business. His first postwar try at building was disappointing—mainly, he now feels, because he supplied the money, let his carpenter-partner run the building end. Wright pulled out when he realized he wasn't really making money.

"I didn't know much about building, but I did know we weren't going about it right."

Wright needed to learn the building business, turned to professional building magazines, claims they taught him the construction business.

"It's like hiring experts—practically free."

Reading magazines paid off—\$24,000 worth—on his first solo venture. Wright hasn't stopped reading them since.

Magazines paid off in a different way: He built magazine-promotion houses to establish his name in the community.

Wright gets local publicity that's extremely valuable, plus the benefit of something-to-talk-about to his prospects.

"And it's no expense to the builder, beyond a press party."

Wright's interest in national promotions and his varied selling features are perhaps more typical of merchant builders than one-of-a-kind builders. But they work for him.

"You can't give people the same old house, year after year, and expect them to get excited. Get something to sell, and then sell it."

That's what Wright says. That's what he's doing.





1950 houses met Wright's market

... 1955 models tripled it

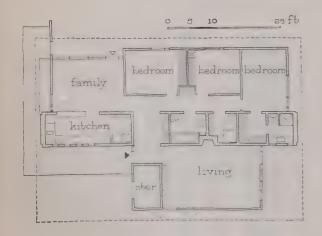
When Wright started building, he concentrated on meeting his market, built "big bedrooms and brick" because that's what his shortage-market customers wanted. But reading and research convinced Wright that he was ignoring a larger market—a market that wanted more than satisfaction. He had sold chrome trim and a foreign-car look to his automobile customers, to step them up from a Ford to a Cadillac. So he looked for extra features that he could sell. His innate selectivity and his willingness to "give it a try" have paid off in stylish, salable houses like the one below—a clean-cut house that fits its lot, includes selling points like kitchen built-ins, a double fireplace (serving as living room hearth, terrace barbecue), a wrap-around terrace, a separate laundry off the kitchen, two baths for three bedrooms. The house writes its own sales talk to second-time buyers.

Fresh design like this helps sell people out of their old houses





Wright finds magazine promotion houses make money

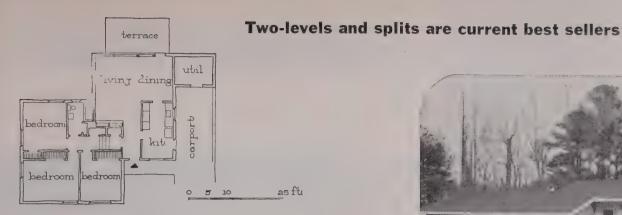


After building three magazine promotion houses, Wright is more enthusiastic than ever. The Columbus Sunday Star-Ledger gave him eight pages of publicity on the Living-Hotpoint house (above). He feels that association with a nationwide promotion, a top magazine, famous brand names, helps him sell all his houses. His whole-hearted cooperation assures return engagements for the promotions. Manufacturers are anxious to install their equipment in a magazine house, so he often saves money on materials, too. Three furniture companies vie for the chance to furnish his models. All this promotion and publicity is matched with good construction and sound business sense. Wright controls costs, supervises closely. He knows that all the showmanship in the world can't cover a sloppy job.

Extras help sell houses

Sliding glass doors, porch skylights, slab construction are innovations in Columbus. Wright introduced them because they are new to second-time buyers, are an incentive to move them out of their old houses. He is constantly seeking new ideas in his reading, ideas that are practical for him to adopt. His nose for news is coupled with a willingness to attempt the unorthodox.



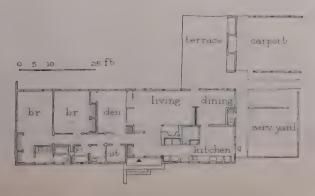


Wright favors multilevels; he sells them as fast as he builds them. He fits them to the site, never uses steep stairs, holds house low to ground. He built his first in '55, will build lots more in '56. Architect: Wilbur D. Talley.





His own house sums up Wright's secret—a mind open to new ideas



A measure of Wright's growth is the simplicity, suitability and utility of the house he chose for himself. It is a comfortable house, not at all startling, but every inch is planned for good living. The same common sense that brings Wright business success has dictated his choice here. For it is common sense that makes Wright see his customers as people, that tells him there's a lot to sell in a house, that helps him borrow from magazines and big builders—common sense that makes money for Ray Wright./END

GOOD LAND USE + GOOD ARCHITECTURE =

ARCHITECT & PLANNER: Oskar Stonorov

LANDSCAPE ARCHITECT: Cornelia Hahn
GENERAL CONTRACTOR: Madway, Engineers & Contractors



LONG EARNING LIFE



Cherokee Village retains distinction of the original property



Old estate was thickly wooded

Here is an example of post-608 rental housing—a 104-unit garden apartment project, called Cherokee Village, built on an old estate in Philadelphia's exclusive Chestnut Hill.

Even this rare example would never have been built if its owner had not seen a way around two obstacles:

- 1. How to persuade planning authorities and public opinion to approve multifamily housing on fine Class A residential property (zoned for three to four families per acre);
- 2. How to make rental housing an attractive investment without an appraisal that permits mortgaging out.

Architect Oskar Stonorov proposed a single formula that met both problems:

"Preserve the character of the neighborhood. See that the buildings are well designed. Don't crowd them. Save the trees and hold the natural contours of the land. This will minimize present and future change and attract the best tenants today and tomorrow.

Looking at Cherokee today (photos left and on following pages) you can see how scrupulously Stonorov followed his own counsel. You can also see why city officials and neighbors abandoned their traditional prejudice against multifamily housing.

From the investment point of view, the key feature of Stonorov's program is the way he guarded against physical and environmental deterioration and designed for high earning capacity long beyond the life of the mortgage. The 1954 tax law gives Owner Donald D. Dodge a chance to recover his investment (plus interest) through accelerated depreciation and then either to sell the project for a capital gain or to hold it for the substantial income available after the 20-year mortgage has been paid off. Either way, success depends on the project's planned ability to retain a high market value over a long term of years.

For more details, see next page.



Fairchild Aerial Surveys, Inc.

Don't impose an arbitrary pattern of streets and buildings on your landscape. Do adjust streets and buildings to existing contours and to preserve existing trees. Stonorov had to go to court to force Philadelphia's street department to relocate one road by 4' in order to preserve seven magnificent oaks planted in 1860. After four months, he won his case.



How to turn an old estate into a green-edged investment

At present Cherokee consists of 104 units in 15 buildings that occupy about 10.5 acres of the 51-acre Dodge estate adjoining Fairmount Park. (Future plans call for building two high-rise apartment houses on 19 acres and putting up 27 single family houses on the periphery of the property.)

Three of Cherokee's existing structures offer duplex apartments ("row houses" with 30' frontages and their own below-grade garages) and the others provide 40 street-floor and 40 one-story walk-up flats with a choice of one, two or three bedrooms. Eight upstairs flats have private entrances.

All buildings are of brick and stucco construction with low pitched roofs. Ground floor terraces and second floor balconies with walls or screens give every apartment space for outdoor living.

The site slopes sharply, falling off more than 30' along its main road. It was, and is, thickly wooded with mature and well cared-for trees: huge beeches, lindens, oaks and other hardwoods. Before any plans were drawn, Dodge spent \$3,500 to take an

inventory of trees. Location, size, condition and species were carefully plotted to enable the development to go ahead with a minimum loss of desirable specimens. Where grading threatened a fine tree, dry-laid stone walls were used to maintain the grade. Steep banks were replanted in ground covers. In all, Architect Stonorov and Landscape Architect Hahn saved 90 magnificent trees, some of them nearly 100 years old.

Other techniques employed by Stonorov in preserving the original character of the property: underground wiring (cost \$40,000); retaining walls to preserve natural grades (the great variety of outdoor areas achieved with very similar buildings is due largely to sloping terrain and planting); aluminum street light standards (extra cost \$100 per pole).

Prior to redevelopment, the land was appraised at \$5,000 per acre. In the completed section current appraisal is \$12,000 an acre. Construction cost was approximately \$11,000 per unit.

Unit floor plans, page 166



Don't rip out some of your finest assets—the trees. Do go out of your way to preserve them. Linden tree (right) was protected by stone retaining wall.





Don't flatten out your natural grades. Because some builders do that, many communities have zoned their best residential areas against developers, forced latter into less stable (and secure) urban fringes. Do use retaining walls, steps, terracing etc. to keep charm of landscape.





Don't think outdoor living just calls for a slab outside the back door. Do provide terraces and balconies, shaded and screened for privacy. A simple outdoor "space-divider" can be put in for \$160, will add immeasurably to making outdoors more inhabitable.



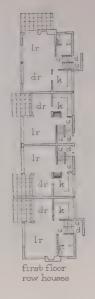


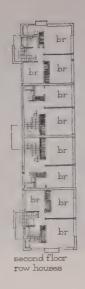
Don't replace your landscape with a "wirescrape". **Do** try to bury all your utilities. Cost per Cherokee unit: less than \$400. Transformers are located in low, brick vaults (center).













Interiors conform to open plan, with free-standing closets and translucent glass panels serving as space dividers. Living areas of upper floor apartments open onto balconies (below).



Photos: (above) Lawrence S. Williams; (opp.) John Ebstel

How to diversify a real estate project



Complete plan for project when finished shows sites for individual houses and for two highrise apartments (still to be built) as well as the two-story buildings already occupied.

One-type residential developments often produce dull (and possibly unstable) communities—families of almost identical incomes, almost identical age, almost identical numbers of children. Sociologists and planners have long deplored this—and so have smart investors.

During localized recessions projects with a single type of tenant may be specially hard hit. By including a variety of accommodations, and thus assuring a variety of tenants, Stonorov reduced the property's economic vulnerability. In Cherokee's completed first section, apartments range in size from three-room units, renting at \$110 to one 6½-room end suite that rents for \$300.

Because Cherokee has so much to offer its tenants, it can command rents \$3 to \$5 per room higher than in other good Philadelphia neighborhoods, and \$10 higher than in run-of-the-mill garden apartments.

Cherokee is the kind of development that will have distinction long after shoddier developments begin to crumble. Says MBA's past president William A. Clarke of rental projects: "We didn't have to foreclose a single, properly planned apartment project during the depression. But apartments built without sound planning advice all went under. Tough renting times are the test."

Street scene (right) shows how Stonorov succeeded in avoiding views of long rows of buildings. Curving streets and calculated siting of buildings brings sight line up short and gives intimate, human scale to public areas.





for further information check numbered coupon, p. 242

A. Air cooled operation is feature of all built-in conditioners; water is not needed so installation requires no pipes, only a nearby electrical outlet. York unit (left) can be installed in wall flush with interior or on floor inside room. York Corp., York, Pa.

S. Smith



B. Steel sleeve for Amic unit is delivered ahead of time for wall installation when house is being built; unit is delivered later, simply slides into the sleeve. Amic Manufacturing Corp., Long Island City, N. Y.



C. Conditioned air is supplied to room through adjustable louvers at unit top, as shown by Chrysler Airtemp model. Stale room air is drawn back to unit through fixed air louvers at lower front. Chrysler Corp., Dayton.



D. In-the-wall installation is not limited to under windows. GE model shows freedom of placement. Unit can be camouflaged in winter by a painting. General Electric Air Conditioning Division, Louisville, Ky.

County Photo Service



E. Typical exterior appearance is shown in outside view of Lewyt unit installed under a bedroom window. Metal grille for outside air is practically flush with exterior wall surface. This model was introduced last year (H&H, April '55). Lewyt Mfg. Corp., Brooklyn, N. Y.

BUILT-IN ROOM AIR CONDITIONING UNITS

Manufacturers introduce special room coolers designed for in-the-wall installation

The photographs on this page show the newest type of room air conditioner to hit the home market. These units are a new version of the standard window cooler, but unlike the window models they were designed especially for installation within the exterior walls of houses.

To fit the new models neatly in a wall, their makers started with a standard window unit and drastically reduced front-to-back depth to as little as 12". This was a drawing tep since some window units run up to 30" have their reduction in depth required a corresponding to the reduction in depth in order to accommodate their time cooling parts.

the new in the-wall units provide conventional air conditioning in the same manner as window models but the cooling mechanism within is arranged more compactly to fit in the wall. Like window units, the new models are also air-cooled and are available in sizes of ½, ¾, and 1 hp. Prices to builders range from \$175 for the ½ hp size up to \$400 for 1 hp, depending on the make and the number of units ordered.

Installation is inexpensive. It costs about \$20 to punch the wall opening and install the unit when a house is under construction. Since units are anchored in wall and not easily removed, they have FHA approval.

One of the main advantages of the new built-in coolers is that they provide an inexpensive way for builders to offer air conditioning as a sales feature in low cost houses. Long Island Builder Milton Saper installs ¾ hp models in the master bedrooms of his \$13,500 models. "We would prefer central air-conditioning," Saper says, "but in our price house buyers cannot afford it." So he offers partial air conditioning with in-the-wall units.

Compared with a central air-conditioning system, inthe-wall units have the advantage of individual room control. Experts point out, however, that installing built-in room coolers throughout a house will invariably cost more than the price of a central system. Moreover, individual built-ins, like window units, may not last more than eight or ten years, as compared to the 15 to 20 year life of a central system.

But for many builders such as Milton Saper, the in-thewall model is a new product of especial interest since it provides home air conditioning at the lowest possible initial cost and with the neatest possible installation.

For more Product News, see p. 176





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Right height found for built-in ovens

Cornell tests show ovens often too high. Average woman risks burns unless oven bottom is 30" from floor

New research from Cornell University shows that many builders are mishandling one of the greatest merchandising assets in the kitchen: the built-in oven. Most builders are locating the oven level with the 36" counter top, which is about 6" too high for the average woman.

The Cornell study reports that the proper height for built-in ovens ranges from 27" to 32" from the floor to bottom of oven, depending on the height of the individual user. For the average woman 30" is the right height. When the oven door is fully open, this will bring the top of the door to 36" above the floor and about 3" below the elbow height of the average woman. With the oven door at this level, the average woman can most easily lift heavy food in and out of the oven.



Adjustable oven was used by Cornell researchers to find ideal installation height for built-ins. Key dimension is A, distance from floor to woman's elbow height. Top surface of oven door should be "comfortable" distance—B—below elbow, which is 3" for most women. Distance C, from door to oven support, is about 6" for most built-in ovens.

Over 50 women cooperated with Cornell, to find the best oven height for "maximum safety, comfort and convenience." Shortest woman participating in the study was a diminutive 4'-10½", the tallest was 6'-1". Key dimension for each woman was her elbow height (distance from floor to elbow, as indicated in photo), which, with the women tested, varied from 35" to 46½". After they had tried out ovens at different heights most of the women tested preferred

* The study shows a variation in individual preference of from 1" to 7".

to have the oven door 3" below elbow height*. At this level they ran least risk of burning their arms or spilling food.

Obviously the tallest woman and the shortest woman did not agree on the most convenient height. For the women tested, the "right" height for the oven door varied from 34" to 41" above the floor.

Builders should design for average woman

Ideally, each woman should have the oven fitted to her individual height. Because production builders cannot operate on this basis they must design for the average American woman, who is 5'.41/2" tall when she wears flat-heeled shoes. Her average elbow height is 39".

From this dimension comes the recommendation that production builders should locate the built-in oven so that the door opens 36" above the floor. This is the critical dimension, which for most (but not all) ovens will put the bottom of the oven 30" from the floor.

The Cornell home economists conducting the study experimented only with electric ovens. But an American Gas Assn. spokesman told H&H that the same height standards can be applied to gas ovens.

Some gas ovens come with a separate broiler compartment below the oven, but they should be installed on the same 30" floor-to-oven-door rule, according to AGA.

The 4 pp. Cornell report "What height for your separate oven?" is available free to New York State residents and for 5¢ to others. Write to Mailing Room, Stone Hall, Cornell University, Ithaca, N. Y.



This built-in oven pleases prospects in model house but is installed too high above elbow height, according to Cornell study.

Expert tells why splits are cold

Why is poor heating one of the biggest consumer criticism of the split-level house?

For three main reasons, according to a recent check of heating complaints in New Jersey and Long Island splits by top expert C. W. Nessell of the National Warm Air Heating & Air Conditioning Assn.: 1) heat is not supplied properly to the lowest level rooms; 2) the jungle of studs in split levels makes it difficult to install the vital trunk ducts; 3) inadequate floor insulation is used for bedrooms located over cold garages.

Loudest complaint. Nessell says the lowest living level in splits—usually a recreation or family room on a slab or basement floor—is the object of the loudest homeowner complaints. He found very cold floors common in these rooms. And the room air temperature varied from floor to ceiling by as much as 32°, which is much too high. The low level rooms are usually heated by means of warm-air ducts located at ceiling level. This means the warm air is discharged into the room from a high source and not enough warmth ever reaches the floor level. The problem is critical since the floor, being below grade, is especially cold.

A good heating job calls for heat to be supplied to these rooms at floor level. Nessell says: "this goes for hot water heat, too." Architects and builders should specify perimeter heat or baseboard systems for the below-grade or on-grade rooms in splits, even though the cost will be more than for ceiling ducts. (Nessell adds that edge insulation around the floor is also essential.)

Inefficient duct runs. Second problem. Nessell reported, arises because split levels are usually a structural nightmare for heating men. He says: "joists and beams run helter-skelter throughout the house. It is often impossible to run a straight trunk duct from one end of the house to the other."

This means primary supply and return ducts have to be snaked into place, piece by piece. This results in zigzag duct runs that are highly inefficient and unsatisfactory because insufficient warm air is delivered to rooms, especially at the far end of the runs. Nessell said architects and builders who want warm air heating should frame to allow for installation of straight trunk ducts.

And more insulation needed. As for cold bedrooms over garages, Nessell said the problem is due to the rapid loss of heat to drafty garages below. Most builders insulate the bedroom floors "but not well enough." Many use the thinnest, cheapest grade of aluminum foil. This grade of foil does not necessarily work best in such a location.

Nessell recommends enough insulation of any type to achieve an over-all floor U factor of less than .10.



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NEW PRODUCTS

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a. Kitchen built-ins include upright freezerrefrigerator combination, oven, griddle and surface cooking units. Foodarama combines 166 lb. freezer with 12.2 refrigerator, fits into space 481/4" w., 62" h., 21" d. Eight pastel colors, white, or brushed chrome exterior can make matching or contrasting color units of oven, freezer-refrigerator. Prices start at \$159.95 for oven, \$674.95 for Foodarama. Surface cooking top costs \$119.95; griddle is \$72.95. Kelvinator Div., American Motors Corp., Detroit, Mich.



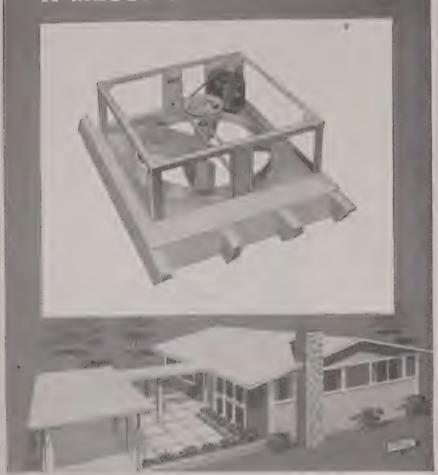
b. Schlage escutcheons, designed with open backs, afford a variety of decorative ideas. Tract builders might well make note of these, since escutcheons, used with different door colors would lend variety of detail to entrance doors

in subdivision houses. Manhattan style shown above, 8" x 43/8", has clean lines. modern feeling. In satin-finished bronze. polished brass, brushed or bright chrome and luster-sealed aluminum. This design costs from \$5-\$5.50 (with standard finish). Schlage Lock Co., San Francisco.



c. Aluminum sliding glass wall door units are available K.D. in multiples of 3' (6-9-12, etc.) or 4' (8-12-16, etc.). Over-all height is 6'10", no extra mullions are needed in any of these multiple door units. Order arrives as three separate packages containing 1) stationary panel, 2) outer frame, and 3) sliding panel, complete with hardware and screws for assembly. Color coded corners on each part make identification and assembly uncomplicated. From \$154.95 for 6' unit to \$334.50 for 16' unit. From Glamour Glass Wall-Dor Corp., Chicago. continued on p. 182

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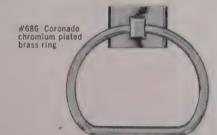


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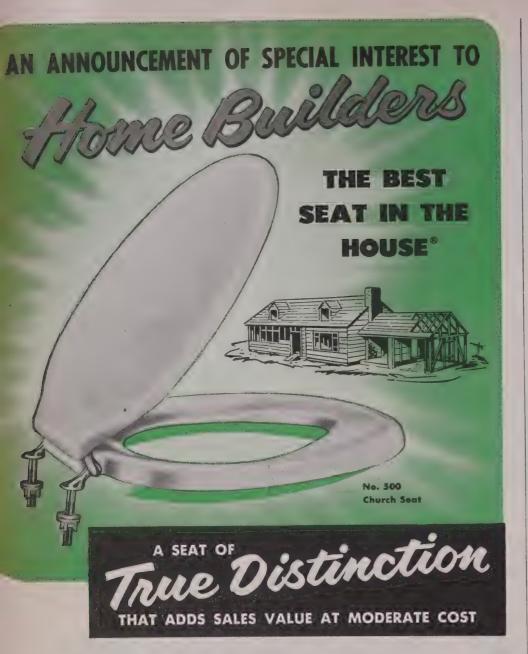
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d. Six-unit cooking top gives more cooking capacity to the kitchen. L&H cooking surface is available in stainless steel and eight porcelain enamel colors. Four units at 1250 w. and two at 2100 w. are controlled by seven-position heat switches for a wider range of cooking temperatures. On-off light indicates whether a switch is on. 35%" d., top is 45" 1., 2134" w. \$194.50. A. J. Lindemann & Hoverson Co., Milwaukee.



e. Electronic range, by Tappan, works without temperature controls. To operate, select high or low speed and set timer which is calibrated in seconds for the first three minutes. Range automatically shuts off when cooking is completed. Microwaves—a particular type of high frequency radio energy—are absorbed in the food while oven remains cool. \$1,200. The Tappan Stove Co., Mansfield, Ohio.



f. Shower doors are practical as well as decorative in any bathroom. These above, called Shower-Glass, are of two semi-obscure panels that roll open at a finger-touch, automatically fit recessed tubs to keep water inside bath. Special mastic enables doors to be installed quickly without drilling tub rim or wall, no screws are necessary. Frame dimensions $\frac{5}{8}$ " x 1-3/16". Height 60" above tub rim. Four models fit tubs from 4' to $\frac{51}{2}$ '. \$109.50 to \$124.50. Shower Door Company of America, Atlanta, Ga.

continued on p. 186

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NEW PRODUCTS

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g. Jumbo truck of heavy duty aluminum alloy pipe easily handles heavy loads up to 4,000 lbs. Heavy loading blades are inserted under loads, then truck is tilted backward and load is in position, well braced, and ready to be rolled away. Truck needs one man to operate, weighs 174 lbs., 74" h., 36" w. Casters are flat tread steel, rubber-tired with heavy duty ball bearings. \$227.85. Rol-Away Truck Mfg. Co., Inc., Portland, Ore.



h. Shingle panel combines sheathing and shingles in one. Manufacturer says builders can close-in twice the wall area in time it takes to perform separate sheathing and shingling. Of double coursed, edge grain No. 1 Red Cedar, type "M" panel has heavy insulating sheathing as a core; type "T's" core is fireproof gypsum rock, ½" thick. All panels are standard 14" x 96" ready for nailing. "M" is \$40 per square (100 sq. ft.), "T", \$35 per square. Kraus Shingle Panel Corp., Buffalo, N. Y.



I. Prefab linen closet-wardrobe comes packaged semi-knocked down, with all hardware in place. Size range makes it possible to assemble in combination to fit rough openings from a minimum of 5' (one wardrobe, one linen closet) to maximum of 12' (two wardrobes, one linen closet) graduated up in 6" units. Assembly above with Philippine mahogany doors, drawers, facings, \$108. Tedrick Bros. Mfg. Co., Kent. Wash.

continued on p. 192

Westinghouse offers home builders

SPECIAL INTRODUCTORY PRICES ON NEW COMPLETE-HOME AIR CONDITIONING!

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DOMESTIC SERVICE Check the class of service desired; otherwise this message will be sent as a full rate telegram FULL RATE TELEGRAM DAY LETTER NIGHT LETTER NO. WDSCL. OF SVC. PD. OR COLL.	WESTINGHOUSE AIR CONDITION	SHIP RADIOGRAM TIME FILED
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NEW PRODUCTS

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i. Foundation ventilator is of die-cast aluminum alloys which resist rust, deterioration. Four models, with or without screen and shutter in one standard 8" x 16" size, are fast and easy to install in either brick or concrete foundations. Aluminum grate allows 104" free area for ventilation. Used with 8 x 8 mesh screen, free area is 83.2". Optional shutters—aluminum or galvanized metal—have aluminum levers to keep shutter locked in open or closed position. Grill with 8 x 8 mesh screen galvanized shutter, about \$23.62. Louver Mfg. & Supply Co., Minneapolis.



k. Roto adjuster for awning type convertible wood windows is a crank-type operator which is worked from inside the screen. Designed for use in Modernaire windows, the roto adjuster can be changed even after installation of the windows with no extra stops or openings required. Sash can be disengaged by pressing button attachment. Window then opens almost 130° for easy cleaning from inside. Basic unit 36" x 22" costs about \$20.32. Modernaire Corp., Cleveland.



l. Crystal door knobs can be used to point up a single door, carry a motif throughout the house. Bubble or clear glass knobs can be matched with drawer knobs of the same designs. Brass and chromium trim finishes, solid brass rosettes add to clean lines. French shank is threaded for use with regular tubular type latches, knob diam. 2", 2½". Bubble knobs \$9.50 pair; clear, \$7. Metallon Products, Tegco Div., Los Angeles.

conitnued on p. 195



m. Built-in garage protection comes in a tough, waterproof reinforced paper, Sisalation, faced by a coating of bright, shiny aluminum. Paper is attached to outside of studs, fastened to plates at top and bottom to form secure, no-sag lining, in single wall construction. Garage is protected from weather, aluminum-faced interior gives a bright, durable lining. 88" wide rolls fit standard 7' stud garage. About \$10 for large two-car garage. American Sisalkraft Corp., Attleboro, Mass.



n. Foil-lined fiber duct was designed for warm air perimeter heating in houses without basements. Rigid fiber tubes are imbedded in concrete slab, connected to plenum at base of furnace. Warm air is forced from furnace into ducts and through entire system and out-registers at the perimeter. Ducts are made in 4, 5, 6, 7, 8" diam. and 12, 14, 16, 18, 20' lengths. From \$112.50 up to \$294.10 per 1,000'. Internat'l Fiber Duct Div., International Oil Burner Co., St. Louis.



o. Baseboard panel sends out either heated or cooled air. New Perim-A-Base panel has unobtrusive slots at top of discharge chamber proportioned to emit—at sufficiently high velocity-layer of cool air on entire outside wall, up to and across ceiling. Prices depend on type of installation, house size. Berger Furnace, Pittsburgh.

continued on p. 202



the hand that buys the home...

...is particular about the windows!

The window women want . . . graceful design and silent finger-tip action . . . tarnishproof anodized finish...easy lift-out cleaning... double weather sealing . . . twin self-latching locks!

Tops among builders, too . . . for its time-saving 1-man installation, nail-on fin trim. and built-in grounds for plaster and stucco/siding! Built for builders by builders.*



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Available in 95 sizes from 2' x 2' to 12' x 6'. Full aluminum screens and storm sash available.

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The greatest advance that's happened since Thermador originated the Bilt-in idea! Two mammoth, fully-automatic ovens are combined into a single unit to take care of all oven requirements simultaneously. While one oven broils, roasts, or barbecues meat or a 24-pound turkey for an entire "banquet" setting; at the same time, the other oven bakes cakes, pies, or breads to perfection. Each fully-automatic oven has more usable space than any other oven made-yet, together they require less than 45" of wall width and only one electrical circuit. Overall dimensions: 441/4" wide, 2811/16" high, 231/2" deep.

The removable, 3-spit rotisserie rack will broil up to 9 chickens at a time and barbecue many other foods. Use one, two, or three spits as desired. Fabulous Vari-Speed switch gives thousands of instant heat selections. Other Thermador features include air-cooled oven doors... easy-to-grip plastic handles...twin electric clocks and automatic timers...dual-range electric Teleminute Timer...full-length protective hood.

With Thermador Cooking Tops, Top-of-the-Range Cooking is Fast and Perfect

Companions of the great new Double Oven are twelve Bilt-in Electric Cooking Tops ... the widest selection available. Any combination available—two to six fast heating elements. Models with giant middle griddle with Vari-Speed switch that provides a "thousand and one" heat selections, Duo-Cook deep well cooker that converts into an extra heating element. All cooking units tilt up for easy cleaning; drip pans are removable.



The Thermador Double Oven and Cooking Tops will be featured in full-page, full-color magazine advertisements: Saturday Evening Post, McCall's, House Beautiful, and Living for Young Homemakers.



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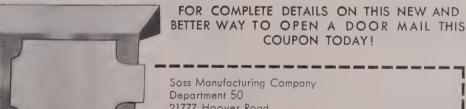
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Sets both 1/4" and 3/8" studs in steel or concrete — in seconds!

Light-, medium- or heavy-duty fastening, the new Model 455 Remington Stud Driver speeds the job. It sets two different size studs... up to 6 studs per minute, either size... and offers new possibilities in anchoring conduit clips, steel frames, wood forms and many other fixtures.

Powerful 22 and 32 caliber cartridges drive ¼" and ¾" studs solidly into steel or concrete. For special medium-duty work, the smaller cartridge is used with the larger stud. Result: the greatest flexibility ever in a cartridge-powered tool! Just clip coupon for details about this cost-saving fastening method.

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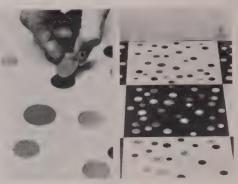
cost-saving Remington St	ee booklet which shows where and how to use the docklet which shows where and how to use the docklet which shows where and how to use the docklet which was to be a simple of the shows the same and the
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NEW PRODUCTS

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p. No-Mar, a clear finish coating for furniture, works equally well for built-ins and woodwork, doors, sills and exterior woodwork. Glass-like finish dries rapidly, protects against scarring, chipping and peeling. Old or new surfaces need just one coat which resists effects of weather. \$4.50 qt.; \$17, gal. Nemes Furniture Craftsmen, Chicago.



q. Polka-dot floor tile forms a bright confetti-like pattern that cannot rub off. Dots are made by stamping coin-shaped disks from a tile of one color, then filling the holes with disks cut from tile of other colors (see above). Inlaid disks fit tightly into tile, are held in place by adhesive cement used to install tile. Polkatiles are 12" squares, in six colors. Each holds 33 dots of three sizes and four colors inlaid irregularly. \$1.65 per sq. ft. Of Bakelite vinyl resins, by Robbins Floor Products, Inc., Tuscumbia, Ala.



of multicolor lacquer, forms a colorful, tough coating. Tadpoles can be added to any multicolor combination and sprayed onto a properly prepared surface to create decorative effects in a single operation. Zolatone process is scrubbable, modern-looking, effective in disguising flaws—all of which makes it equally useful in remodeled houses or in new construction. \$5.25 per gallon. Paramount Paint & Lacquer Co., Los Angeles.

continued on p. 206

sells fast…Insulite up to \$25 per sq.

"Buyers sure like high beamed cellings," says Ray Hunke, successful young Wichita builder. "They regard them as a touch of real luxury. Yet with Insulite Roof Deck, I can actually beat conventional construction by about \$15 per square. And compared with other open-beam methods, Insulite Roof Deck saves me \$20 to \$25 per square—that's \$275 on a small home."

Hunke has now built and sold more than 600 homes—thanks, in large part, to his own smart design ideas. The trim, handsome home below features his highly popular exposed beam construction.

Want complete information on this modern roof-and-ceiling method? For easy-to-follow details; cost-comparison sheets and pictures, write Insulite, Minneapolis 2, Minn.

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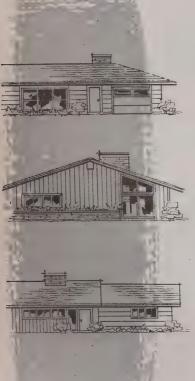




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NEW PRODUCTS

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s. Two-way panel saw simplifies the cutting of sheets of plywood, Masonite, etc. Sturdy lumber frame supports the tubular steel tracks on which the saw runs. A turntable mounting allows either ripping or cross cutting. Operator need not lift or turn sheet, since turntable adjusts for desired cut. One man can cut a 4' x 10' panel faster than two men using a table saw, manufacturer claims. Rig stands on two legs, requires no anchoring, since it can lean against a wall. Hand pressure moves saw for vertical cuts, eliminating the need for a counterbalance. Cuts are square, both vertical and horizontal scales are attached for selective cuts. 12' long, 6'7" high, 24" wide. 140 lbs. About \$250. The Black & Decker Mfg. Co., Towson, Md.



t. Roof-top periscope is particularly useful for bringing electric service lines into ranch type and other low-roofed houses. Because of the low roofs, the usual practice of bringing in lines just below the eaves sometimes creates an accident hazard, often detracts from property appearances. The kit shown installed above consists of an entrance head with slipfitter adapter, a roof flange, mounting brackets for the mast and an adapter for meter connection. Mast height is dependent on need to clear obstructions, and practices regulated by Underwriters and local codes. Approximate prices: \$7.32 per kit for 2" pipe; \$8.40 for $2\frac{1}{2}$ " pipe. Wireholders cost approximately 72¢ each for use with 2" pipe, 84ϕ each with $2\frac{1}{2}$ " pipe. Kit, by Hubbard & Co., Pittsburgh. continued on p. 212



Here's all you have to do: Smart builders know it pays to use Weldwood paneling. But here's an extra dividend! During 1956, the builders who install Weldwood paneling with the most imagination and ingenuity—and who most effectively merchandise the paneling in selling homes—will be flown to Europe via TWA as guests of United States Plywood Corporation.

Now's the time for your building imagination really to pay off! For Weldwood gives you better looking, quicker-to-sell homes, and a chance for a European holiday. There are dozens of ways to add extra sales appeal to your homes—at low cost—with Weldwood paneling. And hundreds of ways to use it in your promotion to help sell homes. Give your imagination free rein—in the paneling, and in the promoting. Remember, there's a trip to Europe waiting!

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(For complete rules, and Official Entry Blank, send coupon)

- 1. Established builders in the United States and Canada are eligible.
- Homes entered in the contest must be finished during 1956.
 Judging will be based on the use of Weldwood paneling, and the merchandising of paneling in the sale of homes.
- Minimum use of Weldwood paneling to qualify will be one wall of any room
- Contest will be in two classifications: homes priced \$18,000 and over, and homes under \$18,000.
- 6. Prominent building experts serving as contest judges are:

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 Journal"

Journal"
Edward G. Gavin, Editor of "American Builder"
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SEND ME the Official Rules and Entry Blank for the big WELDWOOD BUILDER Contest.

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SPLIT-LEVEL HOMES

Build Ford's exciting, new splitlevel homes that give you the opportunity of providing a 6-room home PLUS garage in the foundation area of the home alone. Bed rooms located away from active living areas, giving added privacy. Basement area provides extra living and recreation space, combined laundry and workshop. Easily financed. Approved by leading Building Code Authorities.

SURE-

We still have Ranch style—Cape Cod, too—with expansion attics.

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Ford lays the finish floors—applies the drywall—hangs the doors trims the openings and primes all exterior trim.





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NEW PRODUCTS

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for domestic use and home heating. When domestic hot water is needed, Imperial switches total heating capacity to bathroom or kitchen, switches back to heating system when domestic demand is reduced. 30" x 25½" x 36" size stores easily in limited space. Factory-assembled, only connections needed are to water, fuel, electric lines and to flue. Oilor gas-fired. \$549. Pate Co., Darby, Pa.



v. Damper is designed for multisided and projecting corner fireplaces. With it, size of flue tile can be varied to size, area of fireplace opening to avoid weak or excessive draft. Chimney stack can be located directly above fireplace or in eight off-set positions. Heavy steel form shapes throat smoothly; all four sides of damper have lintel flange whose structural strength permits any load on its span. Six sizes, lintel width 3" on all sizes. \$32.95 to \$65.75. Bennett-Ireland. Norwich, N. Y.



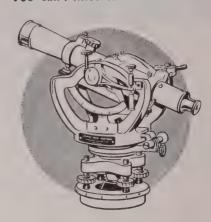
w. Burks centrifugal pump with ½ h.p. capacitor-start motor adapts to shallow or deep wells by use of component part packages required by the job. At 20 lbs. pressure, capacities by practical tests range from 705 g.p.h. at 5′ to 305 g.p.h. on 25′ wells; and from 540 g.p.h. deep well application at 25′ to 380 g.p.h. at 50′. Model above for shallow wells includes HV-15 pump, pressure switch, shallow well educer, air volume control, pressure control valve, 4-gal. tank. About \$105. Decatur Pump Co., Decatur. III.

continued on p. 216

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Aluminum makes neater, cleaner thresholds—easy to install, long lasting, modern looking.



Aluminum siding never needs painting, can't rot or crack. Fire resistant, too!

aluminum

Modern homes feature many more aluminum "marks of quality" than are shown on this house. Aluminum nails would be all over the picture—so would aluminum parts of electrical and heating systems. But this is a start. Besides the items illustrated, the list includes Garage Door, Louvers, Reflective Insulation, Flashing, Shingles, Gutters & Downspouts, Windows. In all those uses, aluminum offers long life and low cost...rust-free, maintenance-free. And wherever the use is visible—as in windows, gutters—aluminum adds the advantage of great beauty. For standard building products designed in Reynolds Aluminum, call your regular supply source. For other product requirements, call the nearest Reynolds office listed under "Aluminum" in classified telephone directories. For complete information, including use of the "Designed in Reynolds Aluminum" seal, write to Reynolds Metals Company, General Sales Office, Louisville 1, Kentucky.



Aluminum storm-screen doors and windows never warp or bend, always look good.



Weatherproof, heat-reflective aluminum awnings add comfort and color to any home.

For quick reference see Catalog $\frac{5a}{Re}$ in Sweet's Architectural File.

ALUMINUM

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x. Push-button window opens and closes electrically. Limit switches prevent overoperation; motor shuts off automatically if electrical elements begin to overheat. In photograph above, sill cover was removed to show the accessibility of the operating mechanism. Single units are available with a toggle type control switch (standard 110 v. current), may be wired for wall control switches. Multiple installations can be wired in any number of combinations for remote control from one master switch panel. Motor and switch, \$40. Window prices vary depending on size, type, remote and multiple control installations but a 3-32-15 window (3-vent, over-all size approximately 3'x4½') costs about \$120. Gate City Sash & Door Co., Fort Lauderdale, Fla.



y. Aluminum window ventilates quickly at the touch of a finger. A counter-balanced double hung design makes possible simultaneous opening of both sash (see photograph above) to give rooms instant, balanced ventilation. A multicontact mohair pile weatherstripping is used in the windows to cut down drastically on air infiltration. Other features include molded nylon slide locks, snap-on fin trim and snap-on interior trim, automatic condensation drainage and vinyl or putty glazing. Best-Vent is available in extra-wide widths and in a range of sizes. Approximate prices: \$22.40 for 3' wide, 3' high type one over one; \$24.65 for 3' wide, 4' high type one over one. Per-Fit Products Corp., Indianapolis.

continued on p. 222



You get permanence of masonry, economy of pre-engineering with the Van-Packer Chimney

You're installing a 100% safe, permanent masonry chimney when you specify the Van-Packer Packaged Masonry Chimney for the homes you build. Van-Packer flue sections are built of $\frac{5}{8}$ " fire clay tile liner, 3" vermiculite concrete insulating wall and cement-asbestos jacket.

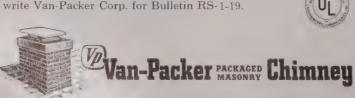
Low-cost, pre-built Van-Packer Chimney goes up in 3 hours, saves you 20-40% over brick. All parts provided, including flashing.

Brick-panel housing of weather-proof cement-asbestos blends with your homes, assures buyer acceptance.

UL listed for all fuels for all home heating plants and incinerators; approved by major building codes.

Ceiling or floor suspended Van-Packer saves you space, lets you locate furnace anywhere. 14" O.D. flue sections fit between joists 16" O.C. without joist cutting.

Immediate delivery to job from your local heating jobber or building material jobber. See "Chimneys — Prefabricated" in yellow pages of classified phone book, or write Van-Packer Corp. for Bulletin RS-1-19.



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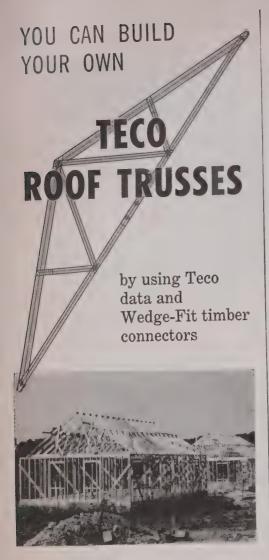
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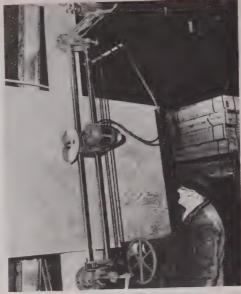
- ... simple to fabricate from regular 2x4s and 2x6s -
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NEW PRODUCTS

details check numbered coupon, p. 242



z. Panel saw sizes plywood, plastic, metals and all large sheet stock. Rigid rail mount permits large sheets to be held in firm cutting position. Saw is drawn through stock by means of a handwheel, chain and sprocket system. Two cap screws loosen to tilt saw for bevel cutting up to 45°. Clockwise rotation of handwheel advances saw. Vertical mounting (see above) saves space; three model heights of 9', 11', 13'. Prices from \$236 for $4\frac{1}{2}$ capacity to \$850 for $12\frac{1}{2}$ capacity, less motor. Motors from 3/4 h. p. up to 3 h. p. Hendrick Mfg. Corp., Marblehead, Mass.



aa. Multipurpose kitchen appliance, by Nu-Tone, consists of four parts: an electrically operated power unit that can be set flush into any kitchen counter, and three basic attachments—a food mixer, blender, and knife sharpener. Stainless steel top plate measures only 51/2"x11"; depth of unit-63/4"-allows for installation in most kitchen drawer spaces. Recessed speed dial controls three attachments. A new principle in kitchen appliances, this "In-Built" food preparation center is not unlike typical power tool kit familiar to carpenters. Factory price about \$70. NuTone Inc., Appliance Div., Cincinnati 27, Ohio.

Technical News on p. 228



GLAMOUR gives custom quality at standard prices! . . .

6 FOOT UNIT \$15495 LIST PRICE

Special prices to builders and architects

You'll find so many quality features in GLAMOUR, that to appreciate their value, you must compare them only with the most expensive units.

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GLAMOUR is the only aluminum sliding glass door manufacturer in the midwest!

This central location means fast service and a great saving in time and money.

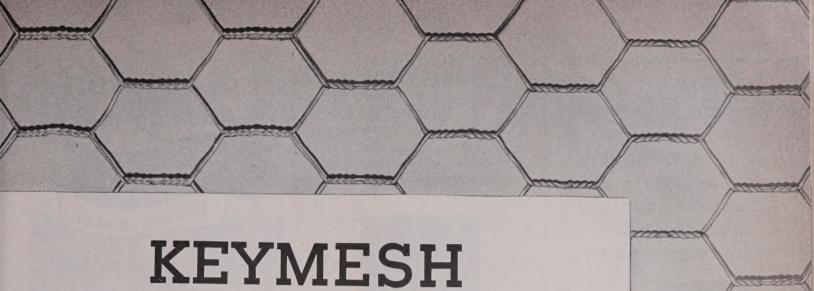
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with gypsum lath and plaster multiplies fire resistance of buildings

Fire safety costs so little.

Actually, walls and ceilings of gypsum lath and plaster, reinforced with Keymesh, cost less than most substitutes. Just see how they multiply fire safety.

Take open-web steel joist floors and concrete slabs with gypsum ceilings, for example. With ½ inch of lightweight aggregate plaster, reinforced with Keymesh-like lath, a fire endurance limit of 3 hours and 28 minutes was obtained.*

Without reinforcement, the limit was 55 minutes. Keymesh adds 2 hours and 33 minutes to the fire endurance limit because it holds the plaster in place. When lath and plaster were omitted, the fire endurance limit was only 7 minutes.

You'll find equally important protection when simple columns and beams of buildings are protected in this same way. It's so good that insurance companies cut their rates because of the greater fire safety. Actually, these lower rates quickly pay the cost of the lath and plaster.

Think of it. Greater fire safety. Acoustical properties, if you wish. Durability. Low maintenance. Beauty. Takes any decoration. Yet ... this fire safe construction costs less than most substitutes. And it can slash insurance rates enough to quickly pay for the plastering.

Actual Fire Test Shows Amazing Value of Keymesh-Type Plaster Reinforcement*

Ceiling of gypsum lath — **KEYMESH**-type reinforcement and $\frac{1}{2}$ " gypsum plaster with lightweight aggregate

Ceiling of gypsum lath and $lat{1}{2}^{\prime\prime}$ lightweight aggregate gypsum plaster

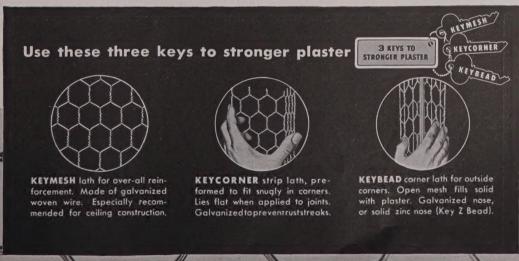
Ceiling unprotected

Fire endurance limit 3 hrs. 28 min. 55 min. 7 min.

*See Building Materials and Structures Report 141, National Bureau of Standards: "Fire Endurance of Open-Web Steel-Joist Floors with Concrete Slabs and Gypsum Ceilings"

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makers of Keymesh · Keybead · Keycorner · Keystone Welded Wire Fabric Keystone Nails • Tie Wire • Keystone Non-Climbable and Ornamental Fence



"... more Architects specify Cabot products than all other stains combined"



"We applaud their specifications because of past experience of owner satisfaction and trouble-free years of beauty.

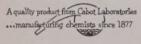
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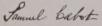
Cabot's RANCH HOUSE HUES®

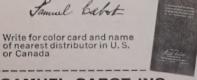
You can be sure of "owner satisfaction" because these stain finishes give colorful protection to all exterior woodwork without obscuring the texture. And leading builders use Cabot's Ranch House Hues because they

- · enrich the natural beauty of wood
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- cost less than 1/2 as much as paint

Available in a choice of 18 modern and traditional colors







SAMUEL CABOT INC. 230 Oliver Bldg., Boston 9, Mass. Please send color card on Ranch House Hues

TECHNICAL **PUBLICATIONS**

for further details check numbered coupon, p. 242

ROOFING

390. Zonatile. Zonolite Co., Dept. HH, 135 LaSalle St., Chicago 3, Ill. 4 pp. Roof tiles of lightweight vermiculite concrete provide insulation, decking in a single product.



391. Built-up Roof Materials Catalogue. Gerwin Industries, Dept. HH, 214 Spring St., Michigan City, Ind. 12 pp.

Detailed application instructions for the Formula line of cold-applied asphalt roofing compounds.



COLOR

392. Colors for Outdoor Applications on Anodized Aluminum. Sandoz Chemical Works, Inc., Dept. HH, 61 Van Dam St., New York, N. Y. 4 pp. folder.

Five sample colors most suitable for outdoor use, description of procedures used to get maximum light fastness in metal finishing.

HEATING

393. Design Data. Taco Heaters, Inc., Dept. HH, 1160 Cranston St., Cranston, R. I. 24 pp.

Design tables for six Taco systems and photographs of heat exchangers, hot water heating equipment.

394. Heating Brochure. Thatcher Furnace Co., Dept. HH, Garwood, N. J.,

The Thatcher line of winter air conditioners, furnaces and boilers.

395. How to Insulate for Electric Heating. Nat'l Mineral Wool Assn., Dept. HH, 2906 Americas Bldg., Rockefeller Center, New York. 16 pp.

The why's of electric heat and how mineral wool insulation is installed in houses using it.

continued on p. 242



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"When it comes to beauty, you just can't beat Carey Fire-Chex Asbestos Plastic Shingles. This, and their Class A rating for fire safety convinced us that Fire-Chex was the best investment we could make for Hi-Tor Woods homes."

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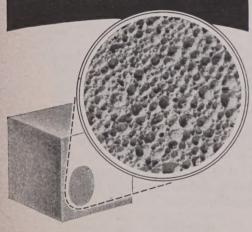
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397. Heatform Portfolio. Superior Fireplace Co., Dept. HH, 1708 E. 15th St., Los Angeles 21, Calif. Loose leaf. Filing kit of complete literature on all fireplace material made by this company.

398. General Catalogue. Berko Electric Mfg. Corp., Dept. HH, 212-40 Jamaica Ave., Queens Village, N. Y. 8 pp. Photographs, information on glass electric radiant heat panels, construction details, specification sheet. 399. 12 Plans for Home Heating. Iron Fireman Mfg. Co., Dept. HH, 3170 W. 106th St., Cleveland, Ohio. 30 pp. The full Iron Fireman line of equipment for warm air or hot water heating and air conditioning.

BUILDING MATERIALS

400. Homes of Permanence and Beauty. Timber Structures, Inc., Dept. HH, P.O. Box 3782, Portland 8, Ore. 8 pp. Application techniques of "glulam" members to post-plank-beam structural system of residential construction. Floor plans, photographs.

401. Building to Endure. Revere Copper & Brass, Inc., Dept. HH, 230 Park Ave., New York. 30 pp.

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